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MANUAL

FOR THE

Normal and Industrial Training Courses

IN

KANSAS HIGH SCHOOLS.

1911–1912.

ISSUED BY

E. T. FAIRCHILD,
State Superintendent of Public Instruction.

STATE PRINTING OFFICE,
TOPEKA, 1911.
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Kansas. Dept. of public instruction.

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PREFACE.

THE PURPOSE of this Manual is to give a history of the normal-training high-school movement in Kansas, and to set forth those requirements of the state department of public instruction which must be met by all schools receiving the benefits and privileges of the normal-training act of 1909, and of the amended act of 1911 increasing the appropriation and making provision for industrial training in high schools.

The Manual is further intended to offer suggestions as to the manner and means of conducting the work in such a way as to meet the approval of this department. There will be available to the department two opportunities for testing just how closely these requirements and suggestions have been followed, namely, first, the examination in the designated normal-training subjects of all applicants for certificates under the normal-training law; and second, the inspection of the work of the schools themselves by the normal-training high-school Inspector. Both the visits of the Inspector and the results of the examinations have revealed the fact that in some cases too little attention has been paid to the regulations of the State Board of Education and to the outlines of the subjects as contained in the Manual. A sufficient supply of the Manuals will be printed so that every teacher and every pupil doing the work in agriculture, domestic science and normal training may have a copy. The examinations will follow the outlines and the papers will be graded accordingly. Therefore it is imperative that the authorities of every approved school should see to it that all normal-training and industrial teachers and pupils are supplied with individual copies of the Manual and that they consult them constantly. The Manual will be furnished free of charge to all such schools by this office.

It is of supreme importance that normal-training pupils be daily led to see the great responsibility of the teaching profession. And since they are to teach in rural schools they should be imbued with a proper spirit towards country life, and urged and aided to acquire a thorough knowledge of rural school conditions and requirements.

Superintendents and teachers by a careful reading of this Manual will find answers to many questions which will naturally arise concerning the work, and thus avoid uncertainty and unnecessary correspondence.

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NORMAL TRAINING IN KANSAS HIGH SCHOOLS.

The theory upon which any system of schools supported by public taxation must be based is that of the general welfare—the greatest good to the greatest number. Otherwise, to tax the childless property owner to educate the children of others would be wholly indefensible. It is therefore incumbent upon school authorities to administer their schools in harmony with this idea. And so far as our common schools and our state institutions of higher learning are concerned this has in general been done. Our common schools furnish the rudiments of knowledge to all who will accept them, and even strive to force all to take them; while our great state schools with their various departments offer opportunities for special and expert training in almost every line of human endeavor. But, curiously enough, the high school, the "poor man's college," as it has been called, has been administered upon an entirely different basis—has been conducted rather as the rich man's school than as the poor man's school or every man's school, as it should have been. The question that has heretofore determined the standing and respectability of a high school has not been, does it seek to prepare its boys and girls to become farmers and farmer's wives, or to engage in commercial pursuits, or to enter the teacher's calling, but does it prepare for admission to the accredited colleges and universities of the state. Far be it from this department to belittle or underestimate the desirability and value of college and university training. Every high-school graduate who has the desire and the means should have the opportunity of entering college. But to make such entrance the sole or even the first purpose of the high-school course is utterly subversive of the whole theory of public education so far as it applies to high schools; for to do so exaggerates the interests of the less than twenty-five per cent of graduates who enter college and correspondingly disregards or subordinates the interests of the more than seventy-five per cent who enter immediately upon active life.

To be sure, it may be said that a course which best prepares for college will best prepare for life. But why may it not be said no less dogmatically that a course which best prepares for life will best prepare for college? Indeed, there are evidences that the colleges and universities themselves are coming to realize that this is a more or less pertinent inquiry; and that

they are coming to this view is the result of three causes. The first of these was the demand on the part of the public for the recognition of business arithmetic, bookkeeping, commercial law, and other so-called commercial branches in the high-school course. The second was the constantly increasing popularity of training in the manual and domestic arts and in agriculture. And the last is the one which furnishes the occasion for this Manual—the demand for the specific training of teachers in our high schools.

To quote from the report of the Educational Commission of 1908:

> It is a well-known fact that the majority of the teachers of Kansas go into the work with little or no special preparation. A number, small, however, compared with the number of teachers in the state, attend some of our normal schools or colleges; but practically all the rural schools are in charge of teachers who have made no preparation except such as the academic studies give them. This is even more of a detriment than appears at first thought, for the graded schools, in which the greater part of the normal- and college-trained teachers are employed, are usually superintended by men of experience and special fitness for the work, while the rural teacher has no one to whom she can go for daily advice and help.

It is a striking anomaly that the lawyer who looks after our material interests, or the physician who cares for our bodily health; even the veterinary who doctors our horses and dogs, the carpenter who builds our houses, or the machinist who repairs our automobiles, must go through a long professional training or practical apprenticeship before he is regarded as fit to ply his trade. Yet every year thousands of inexperienced and untrained boys and girls are allowed—even encouraged—to step out of the ranks of the common schools and to take their places as the counselors and guides of the plastic minds and immortal souls of our dearest possession—our children. And this condition falls with greatest severity upon our rural population, for the school boards in all our cities and in most of our smaller towns have firmly established the rule not to employ a teacher who has not had practical teaching experience or special professional training. So the only place for the untrained tyro, with no education beyond that furnished by the eighth grade, to begin is in some country school. But the beginners must teach, and the school must have teachers. As a consequence our rural schools become the only training school that the vast body of our teachers ever know; and here these teachers learn—by experience and experiment, by practicing upon the tender intellects of the most hopeful and virile youth of the land—those pedagogical principles and educational truths which they should have learned as a part of their preliminary professional training before ever entering the schoolroom "as one having authority." And even this does not tell the whole story. No sooner has one of these journeymen, or rather journeywomen, teachers by virtue of quick insight and

ready acquisition—by reason of the born teacher's birthright—grasped the fundamentals of her great problem and proved herself capable in the application of them, than the superior inducements of the graded school and the ever alert city school board allure her from the country to the town. And the rural school must begin over again the training of another teacher to go the same way; or, it may be, this time to experiment with one who was intended to have been a hewer of wood and a drawer of water instead of a teacher of men.

This situation is the fault neither of the intelligent men and women who make up our agricultural population, nor of the young people who teach their schools; both would have it different if they could. This is shown, on the one hand, by the fact that in many instances country districts strive to overcome the other attractions of work in the graded schools by offering wages that the towns cannot afford to pay; and, on the other hand, by the avidity with which many of these young teachers seize every opportunity within their reach to improve themselves; or, when they have earned the means, seek the opportunity.

The only relief lies in requiring better preparation and some professional training for *all* our teachers. It is the hope and the expectation of this department that the time is not far distant when, as is now the case in some of our sister states, every teacher entering newly upon the work shall have had at least a high-school education, and that the course shall have included at least one year's special professional preparation for the work of teaching. Indeed, by act of the legislature of 1911 the minimum requirement of all teachers entering the profession after May 1, 1917, shall be high-school graduation.

It was in anticipation of this event, and to alleviate present conditions by bringing the means of special professional training to the very door of practically every prospective teacher, and by bringing a scholastically and pedagogically educated teacher to the very door of practically every schoolhouse in Kansas, that the normal-training act of 1909, as printed below, was passed. And the enthusiasm with which it has been received by the people, and the efforts that have been made by the schools to comply with its requirements, give ample evidence that its purpose will be fulfilled.

THE NORMAL TRAINING ACT OF 1909.

AN ACT to provide for normal training in certain high schools and academies, and to provide for state aid to high schools giving such normal training.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. That for the purpose of affording increased facilities for the professional training of those preparing to teach, and particularly those who are to have charge of our rural schools, the State Board of Education shall make provision for normal courses of study and for normal training in such high schools as said Board of Education shall

designate; provided, that said high schools shall be selected and distributed with regard to their usefulness in supplying trained teachers for schools in all portions of the state and with regard to the number of teachers required for the schools in each portion of the state.

SEC. 2. Each high school designated for normal training and meeting the requirements of the State Board of Education shall receive state aid to the amount of five hundred dollars per school year, to be paid in two equal installments, on the 1st day of March and the 1st day of June each year, from the state treasury, on a voucher certified to by its superintendent or principal and approved by the state superintendent of public instruction; provided, that no part of such money received from the state shall be used for any other purpose than to pay teachers' wages; and provided further, that in case more than one high school in any one county shall establish a normal course in accordance with the provisions of this act and shall be accredited by the State Board of Education, the total state aid distributed in such counties shall not exceed one thousand dollars, and in case there are more than two high schools in any one county designated and accredited by the State Board of Education, state aid to an amount not exceeding one thousand dollars shall be equally divided among said schools.

SEC. 3. In order that a high school shall be eligible to receive state aid under this act, it shall have in regular attendance in its normal-training courses at least ten students during each semester, and such normal-training work shall be given under such rules and regulations as the State Board of Education may prescribe, subject to the provisions of this act.

SEC. 4. On the third Friday and Saturday of May each year in each high school accredited under the provisions of this act an examination of applicants for normal-training certificates shall be conducted, under such rules as the State Board of Education may prescribe. This examination shall be in charge of two competent persons appointed by said Board. The said State Board of Education shall prepare the questions and fix the standard for the issuing of said certificates; provided, that said certificates shall be issued only to graduates of said normal courses of study, and shall be issued for a period of two years, and shall be renewable on conditions established by the State Board of Education. A fee of one dollar shall be charged each applicant, and the money so collected shall be turned over to the treasurer of the school where such examination is held, and the treasurer of such school shall pay the persons conducting said examination for their services in a sum not to exceed three dollars per day each. The manuscripts shall be properly wrapped and sealed and sent to the state superintendent of public instruction, accompanied by the fee of ten dollars from the funds of the school. All moneys received by the state superintendent of public instruction from such source shall be turned into the state treasury, and shall become available to pay the expenses incurred by the State Board of Education in securing and paying for a competent examination and grading of said manuscripts. Said certificate shall be issued by the State Board of Education, and shall be valid in any county of the state. All moneys received from such source during the fiscal years ending June 30, 1910 and 1911, are hereby appropriated to pay for said expenses of said State Board of Education. Said expenses shall be paid on the warrants of the state auditor, upon the filing of proper vouchers approved by the state superintendent of public instruction.

SEC. 5. Accredited academies are eligible to the operation of this act except as to receiving state aid.

SEC. 6. The sum of fifty thousand dollars for the fiscal year beginning July 1, 1909, and the sum of fifty thousand dollars for the fiscal year beginning July 1, 1910, or so much thereof as may be necessary, is hereby appropriated out of any funds in the general fund not otherwise appropriated, to carry out the provisions of this act.

SEC. 7. All acts and parts of acts in conflict with the provisions of this act are hereby repealed.

SEC. 8. This act shall take effect and be in force from and after its publication in the statute book.

SUPPLEMENTARY NORMAL AND INDUSTRIAL TRAINING ACT OF 1911.

The results of the original law proved so satisfactory and the policy involved so popular that the legislature of 1911, by a unanimous vote, not only increased the normal-training appropriation for the biennium by practically one-third, but also appropriated $50,000 for the introduction of courses in agriculture and domestic science in normal-training high schools, in accordance with the following provisions:

AN ACT to provide appropriations for normal training in high schools in compliance with chapter 212 of the Session Laws of 1909, and to provide for the introduction of industrial training in certain high schools.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. There is hereby appropriated for normal-training courses in high schools seventy thousand dollars for the year 1912 and seventy-five thousand dollars for the year 1913, or so much thereof as may be necessary to carry out the provisions of the normal-training act of 1909, being chapter 212 thereof, and the rules and regulations of the State Board of Education made in accordance therewith; provided, that no high school situated in the cities having state normal schools shall receive said aid.

SEC. 2. There is hereby appropriated for the year 1912 twenty-five thousand dollars, and for the year 1913 twenty-five thousand dollars, to be expended as follows, and to be distributed in the same manner as is provided for the distribution of the state aid for normal-training courses: Any high schools that now maintain a normal-training course under the provisions of chapter 212 of the Session Laws of 1909, or that shall put into operation such normal-training course, shall be entitled to the sum of two hundred and fifty dollars per annum; provided, that such schools shall also maintain courses in the elements of agriculture and domestic science under such provisions and regulations as may be established by the State Board of Education; and further provided, that no such school shall be eligible to the two hundred and fifty dollars annual state aid, or any part thereof, that shall not have at least ten pupils enrolled in such industrial courses each semester; and provided further, that the same rules and regulations as to examinations shall apply as in the case of the normal-training act.

SEC. 3. That this act shall take effect and be in force from and after its publication in the statute book.

REGULATIONS.

NORMAL TRAINING.

In accordance with the terms of the original law the State Board of Education formulated the following regulations governing the approval and operation of normal-training schools:

High schools and academies to be eligible under the provisions of the normal-training act must: (1) Maintain a four-year course; provided, however, that in counties in which no high school has a four-year course a three-year course may be approved. (2) In all high schools approved under the terms of the normal-training act there shall be at least three regular high-school teachers, exclusive of the superintendent; provided, however, that in those counties in which the three-year course is approved there shall be at least two regular high-school teachers, exclusive of the superintendent; provided further, that in counties in which no organized high school can meet the condition as to the number of teachers, these requirements may be modified at the discretion of the State Board of Education. (3) A teacher shall not teach more than seven classes a day. (4) Before determining the eligibility of any high school there shall be sent to the state superintendent by the superintendent or board of education a certified list of pupils agreeing to undertake the normal-training course, and who shall have signed the following pledge: "We, the undersigned, hereby declare that our object in asking admission to the normal-training class in ——— high school is to prepare ourselves for teaching, and it is our purpose to engage in teaching in the public schools of Kansas at the completion of such preparation. We pledge ourselves to remain in the class the required time unless prevented by illness, or unless excused by the state superintendent of public instruction." All pupils who sign the pledge to take the normal-training course must be members either of the junior or senior class (these may be either juniors or seniors at time of signing, or those who will be juniors or seniors the coming year), or graduates of an accredited high school. Said list shall be sent to the state superintendent by June 1, each year. (5) A reference library consisting of at least thirty volumes, and covering the suggestive list which will be offered later, and from which not less than two books shall be selected on each of the following subjects, will be required: Principles of education, methods of instruction, school management, industrial education, elementary agriculture, history of education.

The requirements for entrance of pupils to the normal-training course shall be the same as the recognized standard of entrance to any other course in accredited high schools.

Regular members of any high school, or the graduates of any high school, or any teacher holding a certificate, whose previous work entitles her to enter the junior or senior year of an accredited high school, shall be eligible to take the normal-training course.

Students graduating in the normal courses, if nonresidents of the district, shall not be charged tuition for the last year of the course.

The normal course, as outlined in the "Course of Study for the High Schools of Kansas" and prepared by the State Board of Education, represents the work that it is expected will be done by all high schools operating under the provisions of this act. It is required that the following distinctively normal-training work be done in the fourth year, namely:

One-half unit—Psychology.

One-half unit—Methods and management, including a certain amount of observation and training work.

One unit—Review common branches; provided, however, that the Board may permit certain portions of work to be done in the third year for good and sufficient reasons.

The State Board further determined:

First.—That the reviews provided for in the senior year of normal-training course shall consist of at least nine weeks each of review work in arithmetic, geography, grammar and reading. It may be added that it is expected that the review in these subjects shall give large emphasis to methods as well as to matter.

Second.—That the subjects for the final examination shall be psychology, methods, management, American history, arithmetic, geography, grammar and reading, and that candidates for normal-training certificates must take the examination at the end of the senior year in all the above-named subjects.

Third.—That until further notice, schools which are unable to meet the requirements of group VIII, as shown in the Course of Study for High Schools prepared by the State Board of Education, may, in lieu of the one unit required, offer one unit of the following: Physiography, one-half unit; physiology, one-half unit; civics, one-half unit; bookkeeping, one-half or one unit; and in group VIII one-half unit each of drawing or music may be offered.

Fourth.—That the requirements as to the educational training of instructors in normal-training courses in high schools accredited by the State Board shall be: *First,* said instructors shall be graduates from the four-year course of the Kansas State Normal School, or of an accredited state normal school; or, *second,* they shall be graduates of the University of Kansas, or of an accredited college or university, and they shall have had at least two years of successful teaching experience; or, *third,* they shall be educators of recognized and advanced scholastic and professional training and of wide experience in public school work; and *fourth,* the selection of such instructors having in particular charge the normal-training courses shall be approved by the state superintendent of public instruction; and these qualifications shall apply to instructors in psychology, methods and management, the review subjects, and the supervisor of observation work.

Fifth.—That all academies and high schools establishing normal-training courses in compliance with the rules and regulations of the State Board of Education, *and not receiving state aid,* may be designated and accredited by the State Board without reference to the number of pupils taking such course; provided, that all the other requirements shall be carried out, and the graduates of such schools shall be entitled to the privilege of certification upon examination by the State Board.

Sixth.—That county high schools shall be eligible to all the provisions of the normal-training act; provided, that they agree to conform to conditions required by law, including the requirement relative to examination and certification as set forth in the normal-training act of 1909.

Seventh.—That all two-teacher high schools shall add one additional teacher in order to be eligible to the terms of the normal-training act.

ADDITIONAL OBSERVATIONS.

The *order* in which the reviews are to be taken is arithmetic, geography, grammar, reading. Psychology is to come the first half of the year, and methods and management the last half. American history and physics are to be continued throughout the year.

Since only those who complete the four years of the normal-training course are eligible to examination, it is required that juniors and seniors only be allowed to sign the pledge to take the normal-training work.

Those juniors who have signed the pledge will be counted as part of the ten required by law. It is expected that in the matter of the reviews in arithmetic, geography, grammar and reading no one but the normal-training students or those expecting to prepare to teach will be permitted to join these classes. The work itself is of such a specific nature and the time devoted to it so short that it would undoubtedly interfere greatly with the progress of the classes if others than those intimately interested in the teaching problem were permitted to become members.

In the other distinctively normal-training studies other than the pledgors may be permitted to enter, though it is believed that it would be much better in the case of psychology and methods and management to confine the membership to the normal-training pupils. In the case of American history, while there need be no great difference in the character of the treatment of this subject for the normal-training pupils, and consequently no second class in this subject need be formed, nevertheless the teacher should keep constantly in mind the fact that a portion of the class at least are preparing to teach, and frequent suggestions relative to the best methods of teaching this important subject should be a definite part of the work.

PROPOSED CHANGES IN THE NORMAL-TRAINING COURSE.

Normal-training seniors for 1911-'12 will be fully accredited for the examination upon graduation from the course as heretofore constituted; that is, upon the completion of the distinctively normal-training work, consisting of psychology, one-half year; methods and management, one-half year; and reviews in arithmetic, geography, grammar and reading, nine weeks each; together with one year's work in American history and in physics.

But beginning with the juniors for 1911-'12 the following must be taken as distinctively normal-training work in the junior year: Civics, one-half year; hygienic physiology, one-half year; and psychology, one-half year. The work of these students as seniors in 1912-'13, and of all normal-training seniors thereafter until further notice, will consist of American history, one year; physics, one year; methods and management, one-half year; arithmetic, one-half year; and reviews in geography, grammar and reading, twelve weeks each.

At the end of the junior year, beginning with 1911-'12, the State Board of Education will give examinations in civics, physiology and psychology. And at the end of the senior year, beginning with 1912-'13, the State Board will give examinations in American history, methods, management, arithmetic, geography, grammar and reading. Seniors in 1911-'12 will be examined as heretofore; that is, in American history, psychology, methods, management, arithmetic, geography, grammar, and reading.

In order that the duplication of classes in psychology may be avoided, it will be permissible during the year 1911-'12 only for the juniors and seniors to take that subject together.

SCHOOLS APPROVED FOR NORMAL TRAINING.

For the year 1909-'10 the normal-training course was instituted in 110 high schools and academies of the state. Every county in which there was a school able and willing to meet the requirements was represented in the list—seventy-eight in all. In these schools 721 seniors and postgraduates completed the normal-training work and took the prescribed examination. Of this number 615 were successful and received the state-wide renewable normal-training teachers' certificates. These young people were generally successful in securing desirable schools at good wages, and have become an integral part of the teaching force of the state.

For the year 1910-'11 125 schools, representing eighty counties, were approved in accordance with the provisions of the normal-training act. In these schools 946 seniors and postgraduates completed the course and wrote upon the examination. Of this number 704 were successful and, with few exceptions, will next year become rural teachers.

For the coming year 160 schools, representing 90 counties, have been recognized for the normal-training work, as follows:

APPROVED FULLY.

Abilene.
Alma.
Anthony.
Arkansas City.
Ashland.
Atchison.
Atchison County High School. (Effingham.)
Baldwin.
Belle Plaine.
Belleville.
Beloit.
Blue Rapids.
Bronson.
Burlingame.
Burlington.
Caldwell.
Chanute.
Chase County High School. (Cottonwood Falls.)
Cheney.
Cherokee County High School. (Columbus.)
Cherryvale.
Cimarron.
Clay County High School. (Clay Center.)
Clyde.
Coffeyville.
Colony.
Council Grove.
Crawford County High School. (Cherokee.)
Decatur County High School. (Oberlin.)
Delphos.
Dodge City.
Douglass.
Downs.
El Dorado.
Ellis.
Ellsworth.
Erie.
Eskridge.
Eureka.
Fort Scott.
Frankfort.
Fredonia.
Galena.
Garnett.
Garden City.
Girard.
Great Bend.
Grenola.
Halstead.
Hanover.
Hartford.
Harper.
Herington.
Hiawatha.
Hill City.
Holton.
Horton.
Howard.
Humboldt.
Hutchinson.
Iola.
Jewell City.
Junction City.
Kingman.

Normal and Industrial Training.

APPROVED FULLY.

Kinsley.
Kiowa County High School.
(Greensburg.)
La Crosse.
Lakin.
Lane County High School.
(Dighton.)
Lawrence.
Leavenworth.
Le Roy.
Liberal.
Lincoln.
Logan.
Lyons.
Mankato.
Marion.
McPherson.
Meade.
Medicine Lodge.
Minneapolis.
Mound City.
Neodesha.
Ness City.
Newton.
Norton County High School.
(Norton.)
Oakley.
Olathe.
Onaga.
Osage City.
Osawatomie.
Osborne.
Oskaloosa.
Oswego.
Ottawa.
Paola.
Parsons.
Peabody.
Phillipsburg.
Plainville.
Pleasanton.
Pratt.
Rawlins County High School.
(Atwood.)
Reno County High School.
(Nickerson.)
Republic.
Rosedale.
Russell.
Sabetha.
St. John.
Salina.
Scott County High School.
(Scott City.)
Sedan.
Seneca.
Sheridan County High School.
(Hoxie.)
Sherman County High School.
(Goodland.)
Smith Center.
Spearville.
Spring Hill.
Stafford.
Sterling.
Stockton.
Thomas County High School.
(Colby.)
Tonganoxie.
Topeka.
Trego County High School.
(Wa Keeney.)
Troy.
Valley Falls.
Wakefield.
Wamego.
Washington.
Wathena.
Wellsville.
Wilson.
Winfield.
Yates Center.

APPROVED IN ALL RESPECTS EXCEPT AS TO RECEIVING STATE AID.

Axtell.
Baker University.
(Baldwin.)
Basehor.
Bethel College Academy.
(Newton.)
Burrton.
Dickinson County High School.
(Chapman.)
Emporia.
Enterprise Normal Academy.
(Enterprise.)
Friends' University Academy.
(Wichita.)
Hiawatha Academy.
(Hiawatha.)
Highland College Academy.
(Highland.)
Kan. Wesleyan Univ. Academy.
(Salina.)
Labette County High School.
(Altamont.)
Marysville.
McPherson College Academy.
(McPherson.)
Midland College Academy.
(Atchison.)
Montgomery Co. High School.
(Independence.)
Moran.
Nazareth Academy.
(Concordia.)
Southern Kansas Academy.
(Eureka.)
Southwestern College Academy.
(Winfield.)
Sumner County High School.
(Wellington.)
Tabor College Academy.
(Hillsboro.)
Wetmore.

INDUSTRIAL TRAINING.

Pursuant to the provisions of the industrial-training act of 1911, the State Board of Education has prescribed the following regulations in regard to the work in agriculture and domestic science:

Agriculture.—The amount of work in agriculture required shall be one year; agriculture being defined as follows: a study of soils, and farm, garden and orchard crops; or a study of soils, farm, garden and orchard crops and animal husbandry. Laboratory work shall require double periods.

Domestic Science.—Domestic science is interpreted to mean what is now generally termed home economics, or household arts, and hence to include both cooking and sewing. The amount of domestic science required shall be one year, and may consist of a year of cooking, or a year of cooking and sewing combined. It is recommended in the event cooking and sewing are combined, that three days out of the week shall be devoted to cooking, and two days to sewing, laboratory work requiring double periods.

The ten pledgors to the industrial work required by law may be divided in any proportion between agriculture and domestic science, but classes in both subjects must be maintained to entitle a school to the state aid.

The Board recommends that the domestic science and agriculture be offered in the sophomore year, and suggests that if necessary they may be substituted for botany; it being the thought that agriculture will be taken by the boys and domestic science by the girls.

It was further agreed by resolution that teachers in either of these courses must satisfy the State Board of Education of their fitness to teach these subjects, and that the approval of the state superintendent of public instruction will be required in every case. General science teachers may be approved to teach the agriculture if their preparation seems sufficient; but a year's special training for the work in some recognized industrial school is the minimum requirement for teachers of domestic science.

SCHOOLS APPROVED FOR INDUSTRIAL TRAINING.

The following normal-training high schools, having qualified under the industrial-training act and expressed their willingness to conform to the requirements of the State Board in connection therewith, have been fully approved for the courses in agriculture and domestic science for the year 1911-'12:

Alma.
Arkansas City.
Atchison.
Atchison County High School. (Effingham.)
Baldwin.
Belle Plaine.
Belleville.
Beloit.
Blue Rapids.
Burlingame.
Burlington.
Caldwell.
Chanute.
Chase County High School. (Cottonwood Falls.)
Cherokee County High School. (Columbus.)
Clay County High School. (Clay Center.)
Clyde.
Coffeyville.
Colony.
Crawford County High School. (Cherokee.)
Delphos.
Dickinson County High School. (Chapman.)
El Dorado.
Ellis.
Emporia.
Eskridge.

APPROVED FOR INDUSTRIAL TRAINING.

Eureka.
Fort Scott.
Frankfort.
Galena.
Garden City.
Great Bend.
Harper.
Hartford.
Herington.
Hiawatha.
Holton.
Howard.
Humboldt.
Iola.
Jewell City.
Kingman.
Kinsley.
Labette County High School. (Altamont.)
Lakin.
Le Roy.
Liberal.
Lincoln.
Logan.
Lyons.
Mankato.
Marion.
Marysville.
McPherson.
Meade.
Medicine Lodge.
Minneapolis.
Mound City.
Neodesha.
Newton.
Oakley.
Olathe.
Onaga.
Oskaloosa.
Oswego.
Ottawa.
Parsons.
Phillipsburg.
Pleasanton.
Pratt.
Rawlins County High School. (Atwood.)
Reno County High School. (Nickerson.)
Rosedale.
Russell.
Sabetha.
St. John.
Salina.
Scott County High School. (Scott City.)
Sedan.
Seneca.
Sheridan County High School. (Hoxie.)
Sherman County High School. (Goodland.)
Spearville.
Spring Hill.
Stafford.
Sterling.
Stockton.
Thomas County High School. (Colby.)
Tonganoxie.
Topeka.
Trego County High School. (Wa Keeney.)
Valley Falls.
Washington.
Wathena.
Wellsville.
Wilson.
Winfield.
Yates Center.

THE COURSE OF STUDY.

The subjects for high-school courses meeting the normal- and industrial-training requirements may be arranged in groups as follows:

NORMAL TRAINING.

GROUP I. English, four units; three units required.

GROUP II. Mathematics, four and one-half units; two and one-half units required.
- Algebra, one and one-half units.
- Geometry, one and one-half units.
- Arithmetic, one-half unit.
- Advanced algebra, one-half unit.
- Trigonometry, one-half unit.

GROUP III. Foreign languages.
- Latin, four units.
- German, three units.

GROUP IV. Physical science, three and one-half units; physics required.
- Physics, one unit.
- Chemistry, one unit.
- Physiography, one-half unit.
- Agriculture, one unit.

GROUP V. Biological science, two and one-half units; physiology required.
- Botany, one unit.
- Zoölogy, one unit.
- Physiology, one-half unit.

GROUP VI. History, four and one-half units; American history (including Kansas history) and civics required.
- Greek and Roman, one unit.
- Medieval and modern, one unit.
- English, one unit.
- American (including Kansas), one unit.
- Civics, one-half unit.

GROUP VII. Commercial, three and one-half units.
- Bookkeeping and business practice, one unit.
- Commercial law, one-half unit.
- Commercial geography, one-half unit.
- Stenography, one unit.
- Typewriting, one-half unit.

GROUP VIII. Arts, four units; one unit required.*
- Manual training, one unit.
- Domestic science, one unit.
- Free-hand and mechanical drawing, one unit.
- Music, one unit.

GROUP IX. Pedagogy, two units; both required.
- Psychology, one-half unit.
- Methods and management, one-half unit.
- Reviews of common branches, one unit.

* This requirement is waived until further notice.

INDUSTRIAL TRAINING.

For an approved industrial-training course, agriculture and domestic science should be added to the required units in their respective groups above.

SUGGESTED COURSES.

The State Board of Education realizes fully the manifold demands which our high schools must meet, and therefore desires, so far as possible, to harmonize the normal and industrial work with courses already existing. To that end the following course is presented as one so arranged as to meet the requirements for the appropriation for normal training, agriculture and domestic science, provided the work is satisfactorily done, and also practically to prepare for college entrance. The course is especially recommended to high schools whose teaching force is so limited as to allow few electives.

SUGGESTED COMBINATION COURSE.

Normal Training—Industrial Training—College Preparatory.

FRESHMAN YEAR.

FIRST TERM.	SECOND TERM.
English.	English.
Algebra.	Algebra.
Ancient history.	Ancient history.
Latin or German.	Latin or German.

SOPHOMORE YEAR.

FIRST TERM.	SECOND TERM.
English.	English.
Geometry.	Geometry.
Agriculture for boys and Domestic science for girls.	Agriculture for boys and Domestic science for girls.
Latin or German.	Latin or German.

JUNIOR YEAR.

FIRST TERM.	SECOND TERM.
English.	English.
Algebra.	Civics.
Hygienic Physiology.	Psychology.
Latin or German.	Latin or German.

SENIOR YEAR.*

FIRST TERM.	SECOND TERM.
American history.	American history.
Physics.	Physics.
Methods and management.	Arithmetic.
Reviews:	Reviews:
Geography 12 weeks, grammar 12 weeks, reading 12 weeks.	

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* This represents the senior year's work beginning with 1912-'13. The senior class for 1911-'12 will pursue the following subjects:

FIRST TERM.—American History, Physics, Psychology. Reviews: Arithmetic, Geography (nine weeks each).

SECOND TERM.—American History, Physics, Methods and Management. Reviews: Grammar, Reading (nine weeks each).

SUGGESTED NORMAL-INDUSTRIAL-ELECTIVE COURSE.

The course below is submitted as one meeting the requirements for normal training, agriculture and domestic science, but without regard to college-entrance requirements or other considerations.

FRESHMAN YEAR.

FIRST TERM.	SECOND TERM.
English.	English.
Algebra.	Algebra.
Electives:	*Electives:*
History.	History.
Foreign language.	Foreign language.
Physiography.	Commercial geography.
Drawing.	Drawing.

SOPHOMORE YEAR.

FIRST TERM.	SECOND TERM.
English.	English.
Geometry.	Geometry.
Agriculture for boys and Domestic science for girls.	Agriculture for boys and Domestic science for girls.
Electives:	*Electives:*
Foreign language.	Foreign language.
History.	History.
Chemistry.	Chemistry.
Botany.	Botany.
Bookkeeping.	Commercial law.

JUNIOR YEAR.

FIRST TERM.	SECOND TERM.
English.	English.
Algebra.	Civics.
Hygienic Physiology.	Psychology.
Electives:	*Electives:*
Foreign language.	Foreign language.
History.	History.
Zoölogy.	Zoölogy.
Stenography.	Stenography.
Typewriting.	Typewriting.
Manual Training.	Manual Training.
Music.	Music.

SENIOR YEAR.*

FIRST TERM.	SECOND TERM.
American history.	American history.
Physics.	Physics.
Methods and management.	Arithmetic.
Reviews:	Reviews:

Geography 12 weeks, grammar 12 weeks, reading 12 weeks.

NOTE.—Certain of the electives might be shifted as to years if it were found desirable.

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* See foot-note following Suggested Combination Course.

SUGGESTED NORMAL-ELECTIVE COURSE.

The following course prescribes only the work absolutely necessary for the approval of normal-training high schools, and entirely disregards the question of college preparatory, commercial, or industrial training, leaving the students free to choose along these lines as they deem best.

FRESHMAN YEAR.

FIRST TERM.	SECOND TERM.
Required:	*Required:*
English.	English.
Algebra.	Algebra.
Electives:	*Electives:*
History.	History.
Foreign language.	Foreign language.
Physiography.	Commercial geography.
Drawing.	Drawing.

SOPHOMORE YEAR.

FIRST TERM.	SECOND TERM.
Required:	*Required:*
English.	English.
Geometry.	Geometry.
Electives:	*Electives:*
Agriculture.	Agriculture.
Domestic science.	Domestic science.
Foreign language.	Foreign language.
History.	History.
Chemistry.	Chemistry.
Manual Training.	Manual Training.
Botany.	Botany.

JUNIOR YEAR.

FIRST TERM.	SECOND TERM.
Required:	*Required:*
English.	English.
Algebra.	Civics.
Hygienic Physiology.	Psychology.
Electives:	*Electives:*
History.	History.
Foreign language.	Foreign language.
Zoölogy.	Zoölogy.
Bookkeeping.	Commercial law.
Stenography.	Stenography.
Typewriting.	Typewriting.
Music.	Music.

SENIOR YEAR.*

FIRST TERM.	SECOND TERM.
Required:	*Required:*
American history.	American history.
Physics.	Physics.
Methods and management.	Arithmetic.
Reviews:	Reviews:

Geography 12 weeks, grammar 12 weeks, reading 12 weeks.

NOTE.—Certain of the electives might be shifted as to years if it were found desirable.

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* See foot-note following Suggested Combination Course.

TEXT AND REFERENCE BOOKS.

The following are the textbooks prescribed by the State Board of Education as the basis of the work in the normal-training classes:

ARITHMETIC.

The state text, together with the Manual to the Myers-Brooks Arithmetics, published by Scott, Foresman & Co., Chicago; the Manual to be in the hands of the pupils.

GEOGRAPHY.

The state text in geography, in connection with King's Methods and Aids in Geography, published by Lothrop, Lee & Shepard, Boston; the Methods and Aids to be in the hands of the pupils.

GRAMMAR.

Gowdy's English Grammar, published by Allyn & Bacon, Chicago, Ill.

READING.

Essentials of Teaching Reading, by Sherman and Reed, published by the University Publishing Company, Lincoln, Neb.

AMERICAN HISTORY.

James and Sanford's American History, published by Charles Scribner's Sons, Chicago, Ill., or Channing's Student's History of the United States, published by the Macmillan Company, Chicago, Ill., or McLaughlin's History of the American Nation, published by D. Appleton & Co., Chicago, Ill.

PSYCHOLOGY.

Betts's The Mind and Its Education, published by D. Appleton & Co., Chicago, Ill.

METHODS.

White's The Art of Teaching, published by the American Book Company, Chicago, Ill.

MANAGEMENT.

Seeley's A New School Management, published by Hinds, Noble & Eldredge, New York city.

CIVICS.

Boynton and Bates's School Civics, with Civics of Kansas, published by Ginn & Co., Chicago, Ill.

HYGIENIC PHYSIOLOGY.

Conn and Budington's Advanced Physiology and Hygiene, published by Silver, Burdett & Co., Chicago, Ill.

AGRICULTURE.

Warren's Elements of Agriculture, published by the Macmillan Company, Chicago, Ill.

Elliff's A Unit in Agriculture, published by Row, Peterson & Co., Chicago, Ill.

DOMESTIC SCIENCE.

No text in domestic science is prescribed for the reason that no single satisfactory book has yet been published. The theoretical side of the subject will have to be gotten from lectures by the teacher and from library reference work.

REFERENCE BOOKS.

For lists of the necessary library reference books in agriculture, American history, civics, domestic science, physiology and reading see the outlines of work in these subjects in the following pages. In a number of schools the visits of the inspector and the results of the normal-training examination have both shown the American history library to be especially weak.

In addition to the above, the following list of books was selected for the pedagogical reference library which each approved school has agreed to purchase. The first thirty volumes are regarded as the ones which it is essential that every normal-training high school shall procure. Those following are suggested as highly desirable supplementary references, and it is hoped that many school boards will see their way to purchase a number of these in addition to the required list:

1. The Educative Process, Bagley.
   The Macmillan Company, Chicago.
2. The Theory of Teaching, Salisbury.
   Row, Peterson & Co., Chicago.
3. Talks on Pedagogics, Parker.
   A. S. Barnes & Co., New York.
4. The Art of Teaching, White.
   American Book Company, Chicago.
5. The Elements of Pedagogy, White.
   American Book Company, Chicago.
6. School Management, White.
   American Book Company, Chicago.
7. School Management, Dutton.
   Charles Scribner's Sons, Chicago.
8. Method in Education, Roark.
   American Book Company, Chicago.
9. Waymarks for Teachers, Sara Louise Arnold.
   Silver, Burdett & Co., Chicago.
10. The Teaching of Geography, Sutherland.
    Scott, Foresman & Co., Chicago.
11. Great American Educators, Winship.
    American Book Company, Chicago.
12. History of Common School Education, Anderson.
    Henry Holt & Co., New York.
13. Teaching a District School, Dinsmore.
    American Book Company, Chicago.

14. Common Sense Didactics, Sabin.
Rand, McNally & Co., Chicago.
15. The Making of a Teacher, Brumbaugh.
Sunday School Times, Philadelphia.
16. Education by Plays and Games, Johnson.
Ginn & Co., Chicago.
17. Reading: How to Teach It, Arnold.
Silver, Burdett & Co., Chicago.
18. How to Teach Reading, Clark.
Scott, Foresman & Co., Chicago.
19. How to Tell Stories to Children, Bryant.
Houghton, Mifflin & Co., Chicago.
20. Talks to Teachers on Psychology, James.
Henry Holt & Co., New York.
21. Psychology, Briefer Course, James.
Henry Holt & Co., New York.
22. Thinking and Learning to Think, Schæffer.
J. B. Lippincott & Co., Philadelphia.
23. Psychologic Method in Teaching, McKeever.
A. Flanagan & Co., Chicago.
24. Among Country Schools, Kern.
Ginn & Co., Chicago.
25. Elements of Agriculture, Warren.
The Macmillan Company, Chicago.
26. Principles of Agriculture, Bailey.
The Macmillan Company, Chicago.
27. Elements of General Method, McMurry.
The Macmillan Company, Chicago.
28. The Method of Recitation, McMurry.
The Macmillan Company, Chicago.
29. Educational Wood Working for School and Home, Park.
The Macmillan Company, Chicago.
30. Sewing Course, Mary Woolman.
Frederik A. Fernald, Buffalo, N. Y.
31. Special Method in History, McMurry.
The Macmillan Company, Chicago.
32. Special Method in Elementary Science, McMurry.
The Macmillan Company, Chicago.
33. Nature Study Lessons, McMurry.
The Macmillan Company, Chicago.
34. Special Method in Geography, McMurry.
The Macmillan Company, Chicago.
35. Special Method in Reading for the Grades, McMurry.
The Macmillan Company, Chicago.
36. Special Method in Language, McMurry.
The Macmillan Company, Chicago.
37. Special Method in Arithmetic, McMurry.
The Macmillan Company, Chicago.
38. One Hundred Lessons in Elementary Agriculture, Nolan.
Acme Publishing Company, Morgantown, W. Va.
39. Agriculture for Beginners, Burkett, Stevens and Hill.
Ginn & Co., Chicago.
40. The Teaching of English, Chubb.
The Macmillan Company, Chicago.
41. The Theory and Practice of Teaching, Page.
American Book Company, Chicago.
42. History of Education, Seeley.
American Book Company, Chicago.
43. The Teacher at Work, Bender.
A. Flanagan & Co., Chicago.
44. Mistakes in Teaching, Hughes.
A. S. Barnes & Co., New York.

45. Elementary Experiments in Psychology, Seashore.
Henry Holt & Co., New York.
46. Ethics for Young People, Everett.
Ginn & Co., Chicago.
47. Cardboard Construction, Trybom.
The Milton Bradley Co., Springfield, Mass.
48. The Best Method of Teaching in Country Schools, Lind.
Hinds, Noble & Eldredge, New York.
49. Classroom Management, Bagley.
The Macmillan Company, Chicago.
50. Jean Mitchell's School, Wray.
Public School Publishing Co., Bloomington, Ill.
51. Education in the United States, Boone.
D. Appleton & Co., Chicago.
52. Pedagogy, Barrett.
D. C. Heath & Co., Chicago.
53. Management and Methods, Sanders.
A. S. Barnes & Co., New York.
54. Educational Reformers, Quick.
D. Appleton & Co., Chicago.
55. Standards in Education, Chamberlain.
American Book Company, Chicago.
56. Phelps and His Teachers, Stephens.
Hammond & Stephens, Fremont, Neb.
57. Agriculture for Common Schools, Fisher and Cotton.
Charles Scribner's Sons, Chicago.
58. Nature Study and Life, Hodge.
Ginn & Co., Chicago.
59. Philosophy of Education, Horne.
The Macmillan Company, Chicago.
60. Educational Aims and Educational Values, Hanus.
The Macmillan Company, Chicago.

OUTLINE OF SUBJECTS.

AMERICAN HISTORY.

In the successful teaching of history the two most essential requisites on the part of the teacher are the ability to arouse the interest of the pupils and the faculty of leading them to see relations. And the following course of study, since it is intended primarily for the use of teachers of other prospective teachers, has been prepared with this thought in mind rather than with the view of including all topics that will necessarily be touched upon in a year's work in the subject. In other words, the outline is intended to be such a one as shall carry with it some thought of proper methods of teaching as well as serve as a guide for systematic study.

Inasmuch, too, as the great majority of those who may pursue this course expect to become teachers in the common schools, it may not be out of place here to point out the kind of an introduction all pupils should have to history before taking up the formal study of the subject.

Beginning not later than the third grade, pupils should be introduced to the unconscious study of history through the medium of story and biography. This work should be continued through the fourth and fifth grades. It should be a *regular* part of the school curriculum and should be given *not less* than twice a week. This may be done in connection with the language work or, when opportunity offers, in connection with the reading lession; *but it should be given.* It should constantly introduce new historic facts and incidents which by their nature and by the form in which they are presented will entertain and consequently interest the children. These stories are much better told than read, but occasionally may be read. They should invariably be reproduced either orally or in writing by the pupils, and the pupils should be encouraged to find out for themselves additional facts or similar incidents to relate.

All this necessarily presupposes the ability on the part of the teacher to tell stories. And no teacher is properly equipped to teach young children until this ability has been developed. An excellent manual for this purpose is Bryant's How to Tell Stories to Children, published at one dollar by Houghton, Mifflin & Co., Chicago.

As sources of suitable material for the stories themselves the following are suggested:

	List price.
First Book of American History, Eggleston. American Book Company, Chicago	60 cents.
Stories of American Life and Adventure, Eggleston. American Book Company, Chicago	50 "
Great Americans for Little Americans, Eggleston. American Book Company, Chicago	40 "
Pioneer History Stories, McMurry. Macmillan Company, Chicago, 3 vols., each	40 "
American Pioneers, Mowry. Silver, Burdett & Co., Chicago	65 "
American Leaders and Heroes, Gordy. Charles Scribner's Sons, Chicago	65 "

After the completion of the story and reproduction work in the fifth grade some interesting and well-connected narrative primary history, such as McMaster's, should be taken up in the sixth grade. If the book selected be itself well written and be supplemented by additional oral matter the pupils should by the end of the year have acquired sufficient interest in, and insight into, their country's history satisfactorily to take up the formal study of the subject. But without such a foundation they will be utterly unprepared to do so.

The department begs to acknowledge its obligation to different sources for material contained in the following pages, and to express the hope that the manner in which it has been put together may be of some service to whose for whom it is intended.

For the satisfactory completion of the outline the following is submitted as the minimum list of reference books which should be available for the use of the pupils:

PEDAGOGICAL REFERENCE BOOKS.

	List price.
Report of Committee of Seven on History. The Macmillan Company, Chicago	$0 50
The Teaching of History and Civics, Bourne. Longmans, Green & Co., Chicago	1 50

HISTORICAL REFERENCE BOOKS.

	List price.
Student's History of United States, Channing. Macmillan Company, Chicago	$1 40
Epochs of American History. Longmans, Green & Co., Chicago, 3 vols., each	1 25
Discovery of America, Fiske. Houghton, Mifflin & Co., Chicago, 2 vols., each	2 00
American Revolution, Fiske. Houghton, Mifflin & Co., Chicago, 2 vols., each	2 00
The Critical Period, Fiske. Houghton, Mifflin & Co., Chicago, 1 vol	2 00
Civil Government, Fiske. Houghton, Mifflin & Co., Chicago, 1 vol	1 00
The Struggle for a Continent, Parkman. Little, Brown & Co., Boston	1 50
History of the Presidency, Stanwood. Houghton, Mifflin & Co., Chicago	2 50
Bird's Eye View of Our Civil War, Dodge. Houghton, Mifflin & Co., Chicago	1 00
American Politics, Johnson. Henry Holt & Co., New York	80
American History Series. Charles Scribner's Sons, Chicago, 7 vols., each	1 00
Documentary Source-book of American History, Macdonald. Macmillan Company, Chicago	2 00

ADDITIONAL REFERENCE BOOKS.

Wherever it can possibly be done the following additional titles should also be procured:

	List price.
The Beginners of a Nation, Eggleston. D. Appleton & Co., Chicago	$1 50
The American Revolution, Lecky (English view). D. Appelton & Co., Chicago	1 00
Expansion of the American People, Sparks. Scott, Foresman & Co., Chicago	2 00
Twenty Years of Congress, Blaine. Published by subscription, but may be gotten second-hand through dealers.	
History of the United States, Schouler. Dodd, Mead & Co., New York, 6 vols., each,	2 25
The United States in Our Own Time, Andrews. Charles Scribner's Sons, Chicago	5 00

	List price.
American History as Told by Contemporaries, Hart. Macmillan Company, Chicago, 4 vols., each	$1 75
How to Study and Teach History, Hinsdale. D. Appleton & Co., Chicago	1 50
Guide to the Study of American History, Channing and Hart. Ginn & Co., Chicago,	2 00
No. 17 Crane Classics, Blackmar. Crane & Co., Topeka (cloth)	25
The Teaching of American History, McLaughlin. D. Appleton & Co., Chicago	Free.

NOTE.—By submitting the entire list to several extensive dealers for quotations and stating that the books are for school library purposes a material reduction from the above prices may be obtained.

OUTLINE OF AMERICAN HISTORY.

The topics here outlined should be thoroughly discussed in class, different authorities should be consulted on methods of teaching history, and in the classroom work, observation work, and practice teaching the conclusions drawn should be kept constantly in mind.

1. Historical study.
   - A. What it is—a study of the highest form of life activity.
   - B. Why pursued in the schools.
     1. Information.
     2. Inspiration.
     3. Appreciation of duties and responsibilities.
     4. Awaken interest in historical reading and activities of men.
     5. Develop ability to judge and reason.
     6. Direct the development of the imagination.
     7. Gain knowledge of books and skill in handling them.
     8. Develop the ability to classify facts.
     9. Develop scientific habit of mind.
     10. Make the world better by avoiding repetition of the mistakes of the past.

2. Methods of historical study.
   - A. In primary grades.
     1. Subject matter.
        - a. Character of.
        - b. How obtained.
        - c. How presented.
        - d. How used by pupils.
     2. What should be accomplished in—
        - a. Biography.
        - b. Anniversary celebrations.
        - c. Current history.
        - d. Historical reading and interest.
   - B. In intermediate grades.
     1. Subject matter.
        - a. Character of.
        - b. How used.
        - c. How correlated.
        - d. Kinds that should not be used.
     2. Results to be secured in—
        - a. Information.
        - b. Reading habits.
        - c. Character of reading matter.
        - d. Formation of ideals.
        - e. Training for citizenship.
        - f. Attitude toward fellow pupils, the school, and the public.
   - C. In grammar grades.
     1. The teacher.
        - a. Preparation.
        - b. Historical library.
        - c. His interest in present-day activities of the world at large.

2. Methods of historical study—*continued.*
   C. In grammar grades.
      2. Subject matter.
         a. Textbook.
         b. Outline books.
         c. Supplementary books.
         d. Collateral reading.
         e. Source books.
         f. Secondary works. (Instructor should distinguish clearly between source books and secondary works, and point out examples of each in school library.)
         g. Outline maps. (The Foster maps, by the Historical Publishing Company, Topeka, and the Ivanhoe maps, by Atkinson, Mentzer & Grover, Chicago, approved by State Textbook Commission.)
      3. Manner of handling the subject.
         a. Uses to be made of—
            1. Written work.
            2. Special reports in class.
            3. Theme work on special topics for investigation.
            4. Progressive map work.
            5. Notebooks.
         b. Relative advantages or disadvantages of outlines. (Hall's Outlines, A. Flanagan & Co., Chicago, 30 cents, postpaid; approved by State Textbook Commission.)
            1. Made entirely by the student.
            2. Made to direct the student but to be completed by him. "Learning by doing."
            3. Fully prepared.
         c. Teacher and class.
            1. Nature of questions asked.
            2. Discussion of motives of characters studied.
            3. Use of hypothetical questions in training to judge results, such as: Would the Mississippi valley have been settled as soon had the early explorers and settlers come to the Pacific instead of to the Atlantic coast of America? with reasons for answer.
            4. Suitable texts, supplementary books, and reference works for properly teaching United States history.

DISCOVERY AND EXPLORATION.

1. Relation between geography and history. (See Channing's Student's History of United States, or for still fuller treatment Brigham's Geographic Influences in American History, $1.25, Ginn & Co., Chicago.)
   A. Temperature.
   B. Rainfall.
   C. Land configuration.
   D. Navigable rivers.
   E. Scientific discoveries and inventions.
2. The aborigines. (For this and discovery and naming of America, see especially Fiske's Discovery of America.)
   A. Origin.
   B. Relation to Mound Builders.
   C. Appearance, character, and manner of life.
   D. Number in 1492 and now.
   E. Name and location of chief tribes.

3. Pre-Columbian discoveries of America.
   A. The Northmen.
      1. When, where, and why.
      2. Proofs of their discovery.
      3. Importance.
   B. Other nations making claims.
      1. Evidence.
      2. Importance.
4. The discovery of America by Columbus.
   A. Causes.
      1. Scientific—The Toscanelli letter and map. (This and following subtopics are intended as merely suggestive and not exhaustive.)
      2. Literary—the revival of learning.
      3. Commercial—the fall of Constantinople.
      4. Religious.
      5. Miscellaneous.
   B. Christopher Columbus.
      1. Life and character.
      2. Voyages.
         a. Number, purposes and result of each.
         b. General results.
5. The naming of America.
   (Show connection of following: Line of demarcation, Vasco de Gama, Cabral, Americus Vespucius, and Waldseemüller.)
   A. Was the naming the result of deception and fraud, or was it the logical outcome of events?
6. Discoveries and explorations of Spanish, English, French, Portuguese, and Dutch. Give in regard to each—
   A. Time.
   B. Place.
   C. By whom.
   D. Conflicting claims to territory as a result.
7. Early attempts at settlement.
   A. Where made.
   B. By whom.
   C. Why. (Compare those of different countries. Show the effect upon Spanish colonization, and upon Spain herself, of the easily gotten wealth she found in the new world.)
8. Effect of defeat of "Spanish Armada" upon settlement and later history of America.
9. Treatment of the Indians.
   A. By the Spanish.
   B. By the English.
   C. By the French.
   D. By the Dutch.
   E. Results.

PERMANENT ENGLISH COLONIZATION.

1. Study each of the thirteen colonies by the following outline:
   A. Name of colony.
   B. Place settled.
   C. Date of settlement.
   D. Classes of colonists and leading persons.
   E. Object of settlement.
   F. Forms of government, local and in relation to the mother country.
   G. Religion.
   H. Education.
   I. Important events in history of the colony.

2. Adaptability of colonists and country to each other in each of the thirteen colonies. (Have pupils notice wherein location influences development, as study progresses.)
3. Some topics worthy of special study in connection with early colonial history.
   - A. Boundary questions. (See Channing's Student's History, Thwaites' The Colonies, in Epochs of American History.)
     1. Virginia by charters of 1606, 1609, and 1612.
     2. Pennsylvania—Mason and Dixon line, extended how far west?
     3. Connecticut.
     4. Southern boundary of Maryland.
   - B. Forms of local government. (See Fiske's Civil Government, and Sloan's French War and the Revolution, chap. II, in American History Series.)
     1. The county as a unit.
        a. Where found.
        b. Why.
        c. Effect on later local and national government.
     2. The town as the unit.
        a. Where found.
        b. Why.
        c. Effect on later local and national government.
   - C. Religious affairs. (See Sloan's French War and the Revolution, chap. II.)
     1. How regarded in each colony.
     2. Troubles:
        a. With Roger Williams.
        b. With Anne Hutchinson.
        c. Salem witchcraft.
        d. In Maryland—toleration act of 1649, and later troubles.
        e. Gradual growth of toleration.
   - D. Notable failures and their causes.
     1. Communism.
     2. Locke's "Grand Model."
     3. Oglethorpe's philanthropy.
   - E. Introduction of slavery and representative government in Virginia, 1619.
   - F. "Fundamental Orders of Connecticut," 1639, the first real constitution in America.
     1. What provision of our present constitution comes from this Connecticut constitution of 1639?
   - G. United Colonies of New England, 1643—beginning of the principle of federation. (Every step in the development of this principle should be traced as study progresses.)
   - H. Indentured servants—"the poor whites."

THE STRUGGLE FOR A CONTINENT.

The instructor should show, and have the pupils verify so far as possible, that the first three intercolonial wars had their origin in European conditions—in the struggle of England and France for world supremacy —while the French and Indian War began in America over American conditions, though European considerations later became involved. The Medieval and Modern History of West, Myers, or any other good authority, will give the necessary facts.

1. Intercolonial wars previous to French and Indian War.
   - A. Cause of each.
   - B. Results in Europe as well as in America.

2. The French and Indian War.
   - A. Causes—remote and immediate—in Europe and America.
   - B. Events leading to the war:
     1. On part of English.
     2. On part of French.
   - C. The three most important strategic points (why?) and their capture—Fort Duquesne, Louisburg, and Quebec.
   - D. Minor events.
   - E. Results: For England, France, Spain, and the colonies. (A "turning point in the world's history." Why?)
   - F. The proclamation line of 1763 — purpose and result. (See Davidson's History of the United States.)
   - G. Conditions in the Colonies, 1760-1770. (See Davidson, Sloan, and Alice Morse Earle's Home Life in Colonial Days, popular edition, 50 cents, Macmillan Company, Chicago.)
     1. Population—its distribution; composite character.
     2. Social life.
     3. Occupations.
     4. Education.
     5. Books and literature.
     6. Political life.

THE REVOLUTION.

1. Colonial policy of England. (In studying this topic the general European view of colonies should be investigated, the attitude of England toward her colonies should be compared with that of other countries, and—as always in the study of history—the spirit and conditions of the time should be considered.)
   - A. Before 1760.
   - B. After 1760, with reasons for change.
2. Navigation laws, and acts of trade.
   - A. Purpose of earlier acts.
   - B. Purpose of later acts.
   - C. Difficulties of enforcing.
   - D. Writs of assistance. (Compare with search warrants as authorized by our present constitution.)
   - E. Ideas of colonists as to legality of writs—actual legality.
   - F. Ideas of colonists as to legality of navigation acts—actual legality.
3. Ideas of representation and extent of right of suffrage. (See McLaughlin's History of the American Nation, and Channing, and investigate the question of parliamentary reform in England; for the latter purpose any good English history will serve.)
   - A. British.
   - B. Colonial.
4. New attempts at colonial taxation.
   - A. Stamp act—reasons for; provisions; kinds of tax.
     1. Results—stamp-act congress—repeal.
   - B. Declaratory act.
   - C. Townshend acts (emphasize *all* of them); kind of tax; purpose for which to be used; changing attitude of colonists, and why.
   - D. Nonimportation agreements.
   - E. Boston massacre.
   - F. Committees of correspondence.
   - G. Boston tea party; changed attitude of colonists regarding taxation.
   - H. The five intolerable acts—name, provisions, and purpose of each.

5. Other causes of the Revolution.
   A. "The Parson's Cause"—Patrick Henry and his speeches.
   B. The Gaspee affair.
   C. George III's desire to increase the power of the king at home —to "be king," as his mother advised.
6. First continental congress—composition; purpose; authority; acts.
   A. Results.
7. Second continental congress.
   A. Reason for.
   B. Authority for or legality of.
   C. How long in existence.
   D. Most important acts.
   E. Did it always prove efficient? with reason for answer.
8. Declaration of Independence.
9. Military events of the war. (After considering the preliminary battles fought before the declaration of independence, a very satisfactory method of studying the Revolution is by considering it from the three purposes of the British: first, the separation of New England from the rest of the colonies; second, the capture of the capital; third, "fraying" the colonies out on the edges. And in doing this the movements of Washington may be followed consecutively to the close of the war, and movements not directly connected with these may be considered in their bearing upon them. Fiske's American Revolution is both valuable and very interesting for this period.)
   A. Movements of Washington.
   B. Burgoyne's campaign—results in England, France, and America.
   C. Foreign aid.
   D. The war in the South, and surrender of Yorktown.
   E. The navy in the war. (See Channing for general view.)
   F. Finances.
   G. Other topics worthy of study.
      1. Hiring of German troops by British. In how far do these soldiers deserve the odium usually attached to the word "Hessian"? What became of most of them after the war?
      2. Work of George Rogers Clark. How connected with proclamation line of 1763, and Quebec act?
      3. Traitors—Benedict Arnold and Charles Lee. (See Fiske's American Revolution, especially concerning Lee.)
      4. The "Stars and Stripes."
      5. Why did America win?
   H. The treaties of peace—preliminary, 1782; final, 1783. (The attitude of France and Spain, as well as of England and the colonies, should be clearly understood, and this will necessitate a full knowledge of the terms of the French alliance. It should be noted that England was willing to concede the colonies more than France or Spain was willing they should receive. For this topic and the entire period of the Confederation there is no book to be compared to Fiske's Critical Period.)
      1. Principal provisions.

THE CRITICAL PERIOD.

1. Review:
   - A. Fundamental orders of Connecticut, 1638-'39.
   - B. The New England confederation, or "United Colonies of New England."
     1. Colonies represented.
     2. Principle of representation adopted, and where found in the government to-day.
   - C. Albany plan of union.
     1. Main provisions.
     2. Why rejected—
        - a. By England.
        - b. By the colonies.
   - D. Stamp-act congress.
   - E. First continental congress.
   - F. Second continental congress.
2. Articles of confederation. (Insist on reasons for calling this the "critical" period in American history.)
   - A. Main provisions.
   - B. Defects. (Discuss all, but especially lack of power to regulate commerce and to punish individuals.)
   - C. Attempts to amend—why unsuccessful.
   - D. Principle of representation.
3. The constitution.
   - A. Shays's rebellion—its significance.
   - B. The meeting at Alexandria, 1785—its cause and purpose.
   - C. The Annapolis trade convention, 1786—its cause and purpose.
   - D. The convention at Philadelphia, 1787—its cause and purpose.
   - E. The three great compromises:
     1. Commerce, the slave trade, and an export tax.
     2. Representation of the states—origin. (See Connecticut constitution of 1639.)
     3. Slaves and apportionment of representation and direct taxes.
   - F. Sources of.
   - G. Ratification—grounds of opposition—the "Federalist." When?
   - H. Gladstone's tribute to the constitution, with some discussion of the justice of it.
   - I. The adoption of constitution a "peaceful revolution." Why?

ORGANIZATION OF THE GOVERNMENT AND FORMATION OF POLITICAL PARTIES.

1. Election of Washington; his inauguration date, and reason for change from date originally intended.
2. The cabinet—authority for and composition.
3. Hamilton's financial policy.
   - A. Reasons for.
   - B. Provisions.
   - C. Results.
4. Establishment of judiciary—authority for—composition of courts—jurisdiction.
5. Foreign affairs: Difficulties with—
   - A. Algiers.
   - B. Spain.
   - C. France. Was Washington's neutrality policy justifiable in view of French alliance during Revolution? Reasons for answer.
   - D. England.
6. Whisky insurrection: Cause—incidents—results.
7. Invention of the cotton gin; effects.

8. Development of parties—the United States bank—"strict construction" and "loose construction."
9. Election of 1796.
10. Other events.

ADMINISTRATION OF JOHN ADAMS: THE LAST OF THE FEDERALISTS.

1. The X. Y. Z. affair.
2. The alien and sedition laws—to what extent justifiable, and to what extent dangerous.
3. The Virginia and Kentucky resolutions. (These should be carefully studied, as to their cause, the reasoning upon which they were based, and the logical results to which they led. And intimate connection of all three of the preceding topics should be clearly brought out.)
4. The eleventh amendment—reason for; case of Chisholm vs. Georgia; wisdom of.
5. Minor events.

THE PERIOD OF ANTI-FEDERALIST, OR DEMOCRATIC-REPUBLICAN, SUPREMACY.

1. Election of Jefferson by house of representatives.
   A. Necessity for.
   B. Incidents.
   C. Results: twelfth amendment; on Burr; on Hamilton.
2. Louisiana purchase.
   A. Why the United States wished to buy.
   B. Why Napoleon was willing to sell.
   C. The negotiations.
   D. Constitutionality in view of Jefferson's "strict construction" ideas.
   E. What was Louisiana as purchased? (It should be noted here and referred to later that the Florida-purchase treaty of 1819, and the rallying cry of "the *re*-annexation of Texas" are intimately connected with this question.)
3. Lewis and Clark expedition.
   A. Object.
   B. Route.
   C. Results.
4. Hamilton-Burr duel—causes, especially the election of President in 1800, and of governor of New York in 1804.
5. The Burr conspiracy; his trial; his later life.
6. The Cumberland road.
   A. How built.
   B. Route.
   C. Results.
      1. Economic.
      2. Political.
7. Jefferson and our foreign relations.
   A. Affairs in Europe—war between France and England.
      1. British orders in council.
      2. Berlin decree.
      3. Second orders in council.
      4. Milan decree.
      5. Effect of these on American commerce.
      6. Impressment of American seamen; by whom; on what grounds.
   B. Affairs in America: Jefferson's peace-at-any-price policy.
      1. Nonimportation act.
      2. Embargo act.

7. Jefferson and our foreign relations—*continued.*
   B. Affairs in America; Jefferson's peace-at-any-price policy.
      3. Nonintercourse act.
      4. Macon bill No. 2; Napoleon's duplicity. Why did United States not fight France instead of England, or France as well as England?
8. Election of Madison; his efforts to avoid war; their failure.
9. War of 1812.
   A. Causes in addition to those given above.
   B. Chief events.
   C. Results: Did the treaty of peace specifically determine them all?
10. The Hartford convention not as "black as it was painted"; explain.
11. The Algerine war; cause; result.
12. The first real protective tariff, 1816.
13. The second United States bank; chartered by "strict constructionists"; why?
14. Election of Monroe.
15. The "Era of Good Feeling." What? Why so called?
   A. The Seminole war; cause.
      1. Jackson's expedition.
         a. Arbuthnot-Ambrister affair.
         b. Result as to England; as to Spain. Was Jackson justifiable?
      2. Purchase of Florida.
   B. The Missouri compromise; the first "alarm bell" in slavery agitation.
   C. The Monroe doctrine. What is it?
      1. Aimed particularly at the Holy Alliance, and at Russia, for different reasons. What? And what part applied to each?
      2. Present status.
   D. Protective tariff of 1824; changing attitude of North and South as represented by Webster and Calhoun, with reasons.
16. John Quincy Adams elected by the house of representatives. Why?
   A. The cry of "corrupt bargain." Why? Was it justifiable?
   B. The American system, or the system of internal improvements at government expense.
   C. The beginning of the National Republican-Whig party.
   D. The first railroads.
   E. "The Tariff of Abominations."
17. The reign of Andrew Jackson.
   A. Jackson, the man; a new type in the presidency.
   B. The "Kitchen Cabinet." What? Why so called?
   C. The spoils system. (In this connection investigate the Crawford tenure-of-office act of 1820, and reason for it.)
   D. Financial affairs:
      1. Veto of the United States bank bill.
      2. Removal of deposits, and Jackson's "pet" banks.
      3. Distribution of surplus.
      4. Speculation, especially in government lands.
      5. The "Specie Circular."
   E. Constitutional questions.
      1. The Webster-Hayne debate.
      2. The tariff of 1832.

17. The reign of Andrew Jackson—*continued.*
    - E. Constitutional questions.
        3. Nullification. (Compare Jackson's attitude on this question with his position in regard to decision of the supreme court in favor of the Indians in Georgia, and adverse to that state. In which case was he right and in which wrong?) Results.
        4. Compromise tariff of 1833.
    - F. The *Liberator* established, 1831.
    - G. McCormick's reaper patented, 1834.
18. Van Buren becomes Jackson's political heir.
    - A. The panic of 1837 (for causes, see above).
        1. Events.
    - B. The subtreasury bill passed, 1840.

THE WHIGS TEMPORARILY SUCCESSFUL.

1. Election of Harrison and Tyler. (Tyler's previous political affiliation and the reason for his nomination by the Whigs, as well as the reason for his acceptance of the nomination, should be fully understood.)
    - A. Death of Harrison.
    - B. Tyler quarrels with Congress over bank bill.
    - C. Tariff of 1842 raises duties.
    - D. Webster-Ashburton treaty.
    - E. Dorr's rebellion.
    - F. Patroon war.
    - G. The magnetic telegraph.
    - H. The slavery question.
        1. The right of petition.
        2. Gag rule. What? Through whose efforts finally rescinded?
        3. Texas annexed. How? Why? What other territory has been annexed *by joint resolution?*

THE DEMOCRATIC PARTY RETURNS TO FULL POWER UNDER POLK.

1. Texas admitted as a state.
2. The Mexican war. (Investigate previous history of Mexico and Texas as to independence and status of slavery.)
    - A. Nominal causes. (Investigate basis and justice of cry "The *re*-annexation of Texas and *re*-occupation of Oregon"; also cause and outcome of cry of "Fifty-four Forty or Fight.")
    - B. Real cause.
    - C. Lincoln's "spot resolution"; its significance.
    - D. The Wilmot proviso.
    - E. Military events:
        1. Taylor's part in the war.
        2. Kearny's expedition.
        3. Fremont, Sloat and Stockton in California.
        4. Scott's campaign.
    - F. Treaty of Guadaloupe-Hidalgo and results of the war.
3. Discovery of gold in California.
    - A. Results.
        1. On California.
        2. On rest of West.
        3. On slavery question.
4. Howe patents his sewing machine, 1846.

THE WHIGS WIN THEIR SECOND AND LAST VICTORY: TAYLOR AND FILLMORE.

1. The omnibus bill, or compromise of 1850.
    - A. Causes.
    - B. Provisions.
    - C. Results.

2. Clayton-Bulwer treaty. (Investigate relation to Hay-Pauncefote treaty and present Panama canal.)
   A. Provisions.

THE DEMOCRATS AGAIN RETURN TO POWER, WITH PIERCE AS PRESIDENT.

1. Gadsden purchase.
2. Perry's expedition to Japan.
3. Ostend manifesto.
4. Kansas-Nebraska bill. (The intimate connection between the Mexican war, the discovery of gold in California, the compromise of 1850, and the Kansas-Nebraska act should be strongly emphasized, and the question as to whether the provision with reference to Arizona and New Mexico was put into the compromise of 1850 as a "joker," to be used later in securing the repeal of the Missouri compromise, or whether it was simply used when the need arose, should be thoroughly investigated. See Burgess's The Middle Period, in American History Series.)

[Since whatever review of Kansas history normal-training students get will probably be in connection with their study of United States history and without the use of any additional textbook, the desirability of making that part of the outline dealing with the struggle for Kansas especially full is strongly felt. For that reason, Supt. J. O. Hall has been asked for, and has kindly given, his permission for the use of that part of his "Outline of United States History" touching upon this phase of the subject—the same being all of section 5 following.]

5. The struggle for Kansas.
   A. Preparations.
      1. In the North: Emigrant aid companies.
      2. In the South: Emigrants from Missouri and Southern states.
      3. Leading men sent out.
      4. Towns founded:
         a. By free-state people: Topeka, Lawrence.
         b. By pro-slavery people: Lecompton, Atchison, Leavenworth.
   B. Beginning of the struggle.
      1. A. H. Reeder appointed governor July 7, 1854.
      2. Pro-slavery delegate elected to Congress November 29, 1854. Missourians voted at this election. Result: Increased bitterness and great accession to free-state forces.
      3. Governor Reeder has census taken before calling election for members of legislature.
      4. Pro-slavery territorial legislature elected March 30, 1855. Many Missourians voted at this election. Governor set aside election in eight districts, and called new election there. At new election pro-slavery people refused to vote, and free-state candidates were given certificates of election.
      5. Legislature met at Pawnee at call of governor, July 2, 1855.
         a. Its acts at Pawnee:
            1. Unseated all of free-state members elected at supplemental election called by governor, except one. Before legislature met one free-state member had refused to serve.
            2. Passed, over governor's veto, act to adjourn to Shawnee.

5. The struggle for Kansas—*continued.*
   B. Beginning of the struggle.
      5. Legislature met at Pawnee at call of governor, July 2, 1855.
         b. Its acts at Shawnee:
            1. Asked President to remove Governor Reeder.
            2. Passed Missouri slave code laws, and made it an offense to say or write anything against slavery.
            3. Located capital at Lecompton.
            4. Provided for a constitutional convention.
            5. Passed act entitled "An act to punish offenses against slave property."
      6. Reeder forced to leave the territory.
   C. Topeka constitution, anti-slavery, October, 1855.
      1. Convention called by free-state people, September, 1855. This convention, which issued call for election, met in response to a call by an earlier political party convention at Big Springs. The general purpose of the free-state people was to avoid obeying acts of the Shawnee legislature, called "bogus legislature," and if possible secure admission as a free state.
      2. Constitutional convention met at Topeka, October 23, 1855. Composed entirely of free-state members.
      3. Free-state constitution formed, submitted to the people, and ratified by them December 15, 1855. Only free-state people voted.
      4. State election held, Robinson elected governor, other state officers and state legislature chosen, January 15, 1856.
      5. Officers did not attempt to assume charge of the government, except that legislature met, but simply held themselves in readiness to take charge when Kansas should be admitted as a state under the constitution.
      6. Constitution sent to Congress and opposed by President Pierce. Approved by house, disapproved by senate.
      7. Topeka legislature dispersed by U. S. troops, July 4, 1856.
   D. Lecompton constitution, pro-slavery, 1857-'58.
      1. Convention met September 11, 1857, in pursuance of call by pro-slavery legislature. Composed entirely of pro-slavery members. ....
      2. As the convention saw that the people were likely to disapprove of the constitution they decided to submit to vote only the clause regarding slavery, and so people voting on it had to vote:
         a. For the constitution with slavery, or
         b. For the constitution without slavery; thus voting for slavery in either case, for the constitution provided that slave property in the territory should not be interfered with.
      3. On the face of the returns the constitution was almost unanimously approved, as only pro-slavery people voted.
      4. While the convention was in session the free-state people had elected a majority of new legislature at election at which occurred the Oxford, or Cincinnati Street Directory, frauds.
      5. Free-state people urged governor to call special session of the legislature, which he did.
      6. New legislature submitted constitution to the people so they could vote for or against it, and it was voted down almost unanimously, only free-state people voting.

5. The struggle for Kansas—*continued.*
   D. Lecompton constitution, pro-slavery, 1857-'58.
      7. Constitution sent to Congress and approved by senate, but disapproved by house. By the terms of the English bill, a compromise measure, the constitution was referred back to the people of Kansas for approval or rejection.
      8. Constitution then rejected by more than 11,000 in total of 13,000 votes, August 2, 1858.
   E. Leavenworth constitution, anti-slavery, 1858.
      1. Convention met first at Minneola, March 23, in pursuance of an act declared to have been passed over the governor's veto, but which was not. The convention adjourned to Leavenworth.
      2. General objects in view were:
         a. Fight admission of Kansas under Lecompton constitution by showing Congress that people did not favor it.
         b. Secure admission as a free state if possible.
      3. Submitted to and approved by people, free-state people voting, May 18, 1858.
      4. Sent to Congress but not approved by either house.
      5. Convention composed entirely of free-state members.
   F. Wyandotte constitution, anti-slavery, 1859-'61.
      1. Legislature submitted to people the question whether or not they wanted a constitutional convention, and the people said they did, March 28, 1859. Legislature soon called the convention.
      2. Convention met July 5, 1859. Members met as Republicans and Democrats, this being the first constitutional convention in Kansas in which more than one party was represented.
      3. Constitution ratified by the people, October 4, 1859.
      4. Robinson elected governor, and other state officers elected, December 6, 1859.
      5. Topeka made temporary seat of government.
      6. Constitution sent to Congress, but could not be approved in both houses till some of pro-slavery members withdrew on secession of Southern states.
      7. Congress approved the constitution, and the bill admitting Kansas as a state became a law January 29, 1861.
6. Buchanan's forecast of the Dred Scott decision.
7. The Dred Scott decision. (In connection with this and the preceding topic pupils should find Lincoln's story about "Franklin, Stephen, Roger and James," and explain its application. See Blaine's Twenty Years of Congress.)
   A. History of the case.
   B. Decision on case itself; decision on incidental points, or *obiter dicta.*
   C. Results.
8. Panic of 1857.
9. The Lincoln-Douglas debates.
   A. Why? Chief topic? What was Douglas's "Freeport doctrine"? What was its effect on him as a presidential possibility? Explain. (See Wilson's Division and Reunion, in Epochs of American History.)
   B. Result as to Lincoln; explain.
10. John Brown; his raid, its purpose and result. (Especially read Burgess's The Civil War and the Constitution, in American History Series.)
11. The presidential campaign of 1860.

TWENTY-FOUR YEARS OF REPUBLICAN RULE.

[Here the origin and composition of the Republican party should be carefully considered. All the direct causes of secession, from the introduction of slavery, in 1619, should also be reviewed.]

1. The secession of the Southern states. (It should be emphasized that this was due to the election of Lincoln on a platform opposing the extension of slavery, and not because either Lincoln or the Republican party was committed to the abolition of slavery.)
2. The formation of the Confederate government.
3. Buchanan's attitude, and his reason for it. Was it sound?
4. Efforts at compromise; proposals, and results.
5. Comparison of the sections.
6. The war.
   - A. Military operations. (These operations should be studied as being almost wholly offensive on the part of the North and defensive on the part of the South. And the war should be considered from the view of the two general purposes of the North—that is, to push the Confederate line of defense south and to blockade Southern ports. The three great efforts to accomplish the first of these results were to capture Richmond, to open the Mississippi, and to penetrate the heart of the Confederacy and capture Atlanta as the great central supply depot; and the success of these efforts, together with the establishment of an effective blockade, finally wore and starved the South out. Dodge's Bird's Eye View of the Civil War is the best single volume on the subject.)
   - B. Finances.
   - C. The border states.
   - D. The emancipation proclamation; three reasons for it. (See Wilson's Division and Reunion, in Epochs of American History.)
   - E. Results.
7. Lincoln's assassination and Johnson's succession.
8. Lincoln's reconstruction policy so far as developed.
9. Johnson's reconstruction policy; compare with Lincoln's as to liberality; cause of hostility of Congress.
10. Congressional reconstruction policy. Why did Congress have a constitutional advantage in the contest? What was the real status of the seceded states? Were they readmitted, or how did they get back into their former relationship?
11. Impeachment, trial and acquittal of Johnson.
12. The thirteenth amendment, 1865.
13. The Atlantic cable, 1866.
14. The purchase of Alaska, 1867.
15. Fourteenth amendment, 1868; compare with civil rights bill. Why was latter not considered sufficient?
16. Grant's elevation to the presidency.
17. The fifteenth amendment, 1870. What states had to ratify in order to resume former place in the Union?
18. Negro suffrage and "carpetbag government." (Should the negroes have been given the right of unrestricted suffrage?)
19. The Ku-Klux Klan.
20. The force bills, and use of United States courts and United States army in the south.

21. Troubles with England, and their arbitration.
    A. Alabama claims.
    B. Fisheries question.
    C. Northwestern boundary dispute.
22. Temporary civil service reform. (Why only temporary?)
23. The panic of 1873.
24. Demonetization of the silver dollar, 1873. Why? Why afterwards called the "Crime of '73"? Is silver dollar coined now? What is the present legal standard of value?
25. Resumption of "specie payment"; meaning; purpose; result. (In this connection the two contradictory decisions of the supreme court with reference to the legal-tender qualities of "greenbacks" should be investigated; the reason for the reversal of opinion, as well as the present status of the various kinds of paper money, should be understood.)
26. The "Credit Mobilier." (Show connection between this and the Liberal Republican movement.)
27. The "salary grab" act. (Compare its reception by the public with that of the recent increase in congressional salaries, and explain reasons for difference.)
28. The "whisky ring."
29. Indian troubles, and the killing of Generals Canby and Custer.
30. The only disputed presidential election in our history. (Pupils should see clearly and be able to explain just why the Hayes-Tilden contest did not go to the house of representatives for settlement.)
    A. The cause of the dispute.
    B. The Electoral Commission.
        1. How composed. (It should be clearly shown just how it came about that there were eight Republicans and seven Democrats.)
        2. Its duties.
        3. Its decision.
31. Withdrawal of Federal troops from the Southern states. (Was there an understanding between Hayes and the Democratic leaders that if allowed peaceably to take his seat he would withdraw the troops? As a matter of public policy was their withdrawal wise?)
32. The Bland-Allison act.
    A. Reasons for.
    B. Provisions.
    C. Why vetoed by President. Was his action final?
33. Results of actual resumption of specie payment.
34. The election of Garfield and Arthur.
35. Strife within the party; stalwarts vs. half-breeds; Blaine vs. Conkling; resignation of Conkling and Platt, and result.
36. Assassination of Garfield.
37. The Pendleton civil-service-reform act. (Here the history of the "spoils system," and of attempts at civil service reform, should be reviewed, and pupils should note the connection between the spoils system and the assassination of Garfield, and between his death and the Pendleton act.)
38. The Chinese-exclusion act.
    A. Reasons for.
    B. Provisions.
    C. Present status.

39. The Edmunds anti-polygamy act.
    A. Purpose.
    B. Later anti-polygamy legislation.
    C. Present status of polygamy.

THE DEMOCRATS WIN THEIR FIRST PRESIDENTIAL ELECTION SINCE THE WAR.

1. Cleveland elected President; tariff the main issue, but personality of candidates an important factor in campaign.
2. The presidential-succession law.
    A. Two reasons for.
    B. Provisions.
3. Electoral-count act.
    A. Reasons for.
    B. Provisions.
4. Interstate-commerce act, 1887. (In this connection study should be made of "railroad rate" and "pure food" laws of the Roosevelt administration, and of the railroad bill of the Taft administration. From this point on Hall's Outlines and the annual volumes of the World Almanac, particularly the more recent ones, together with current-event magazines, will be found especially valuable.)
5. The Mills tariff bill.
    A. Character.
    B. Why it failed to become a law.
6. Cleveland's use of the veto power.
7. More anti-Chinese legislation.
8. The anarchists, and the Haymarket massacre.

THE REPUBLICANS ELECT HARRISON, BUT AS A MINORITY PRESIDENT.

[Pupils should be able to explain clearly how this is legally possible.]

1. The Reed rules in the house of representatives.
    A. Reason for.
    B. Provisions.
    C. Compare with present rules. (Discuss recent changes.)
2. The McKinley bill, providing for the highest tariff in our history, free sugar, reciprocity.
3. The Sherman silver act, 1890.
    A. Reason for.
    B. Provisions.
4. Sherman antitrust act, 1890, its purpose and provisions.
5. Mafia troubles in New Orleans. (This should be compared with the Caroline affair in Tyler's administration and the Japanese school troubles in California in Roosevelt's administration. The serious and embarrassing position in which such difficulties place the national government and the reason therefor should be fully understood by the pupils. For discussion of this subject, see President Taft's first message to Congress.)
6. Growing use of the "Australian ballot," and advantages.
7. Original-package law.

CLEVELAND IS THE DEMOCRATIC PRESIDENTIAL CANDIDATE FOR THE THIRD TIME AND IS ELECTED.

1. Panic of 1893.
2. Repeal of purchasing clause of Sherman silver act.
3. Our relations with Hawaii.
    A. Under Harrison's administration.
    B. Under Cleveland's administration.

4. Trouble between Venezuela and Great Britain.
   A. Cause.
   B. The Monroe Doctrine and position of United States.
      1. Attitude of England.
   C. Final arbitration.
5. The Pullman strike and resulting sympathetic strikes.
   A. Events.
   B. Attitude of President.
6. The Wilson tariff bill.
   A. Material reduction of duties.
   B. Income tax provision.
      1. Limit and levy.
      2. What afterwards happened to it?
      3. What movement now on foot with reference to an income tax?
   C. Enlarged free list.
   D. Final action of President, and reason for it.
7. The campaign of 1896.
   A. "The free coinage of silver at the ratio of 16 to 1" the "paramount" issue. (Pupils should understand clearly the meaning of this issue, and should in connection with it review previous silver legislation.)
      1. Arguments for.
      2. Arguments against.
   B. Incidents.
   C. The result.

REPUBLICANS IN COMPLETE CONTROL, WITH M'KINLEY AS PRESIDENT.

1. The Dingley tariff bill.
   A. General provisions.
   B. Reciprocity.
      1. Attitude of President.
      2. Attitude of senate.
2. Spanish-American war. (History of previous relations of Spain, Cuba and United States should be here reviewed—Ostend manifesto, Virginius affair, Ten Years' war, etc.)
   A. Causes.
   B. Events.
   C. Results.
   D. Government of our new possessions.
3. Annexation of Hawaii.
4. The gold-standard act, 1900.
   A. The standard of value.
   B. Changes in the national banking law.
5. Reëlection and assassination of McKinley.
6. Succession of Roosevelt.
7. Establishment of Department of Commerce and Labor.
8. Railroad-rate law.
9. Pure-food-and-drugs act.
10. Service-pension law.
11. Law limiting working hours of railroad employees.
12. The Panama canal. (Previous history of the project should be reviewed.)
    A. The Clayton-Bulwer treaty.
    B. The Hay-Pauncefote treaty.
    C. The Hay-Herran treaty.
    D. Independence of Panama and Hay-Varilla treaty.
    E. Plans and progress of the work.

13. Temporary intervention in Cuba.
    A. Cause.
    B. Result.
14. Trust prosecutions.
15. Admission of Oklahoma.
16. The insurance and other "grafters."
17. Panic of 1907.
18. The Hague conference. (Movements toward international arbitration should be reviewed.)
19. Taft elected President.
20. The Aldrich-Payne tariff revision bill passed by special session of Congress.
    A. Its provisions and their reception by the public.
21. The railway regulation act.
22. The postal savings bank law.
23. Bills for admission of Arizona and New Mexico.
24. The elections of 1910 and their general result.
25. Second regular session of sixty-first Congress.
    A. The question of direct election of senators.
    B. The Lorimer case.
    C. Canadian reciprocity.
    D. Other measures.
26. Special session of the sixty-second Congress.
    A. Democrats control the house and elect Champ Clark speaker.
    B. Senate so divided among Democrats, Regular Republicans, and Insurgent Republicans that there is no working party majority, though the Republicans nominally control.
    C. The direct election of senators.
    D. The Lorimer case reopened.
    E. Canadian reciprocity.
    F. The Status of Statehood for Arizona and New Mexico.
    G. "The farmer's free list," and other tariff bills.
27. The conservation movement.
28. Decision of the supreme court in the Standard Oil and Tobacco Trust cases.
29. Status of international arbitration and the universal peace movement.
30. The revolution in Mexico.

After the work as here outlined has been covered the whole should be fixed, and a clearer idea of its unity be obtained, by a general review. And so far as possible this should be done by the topic method. As examples of subjects that may be thus treated the followiing may be mentioned:

The evolution of the constitution.
The origin and growth of political parties.
Territorial expansion.
Tariff legislation.
The slavery question.
Nullification and secession.
Our financial system.

Each topic should be taken up from its first appearance in our history and traced to its end or to the present time, without the intervention of any except directly related subjects, and connections should be strongly emphasized.

As an illustration of how this may be done the following outline on the slavery question is given:

1. Slavery introduced, 1619.
2. Slavery in every colony, 1776.
3. First states to abolish slavery. What? Why?
4. Slavery in the constitution.
5. Invention of the cotton gin, 1793.
6. Legislation on slave trade, 1808, 1820.
7. Missouri compromise, 1820.
8. The *Liberator*, 1831.
9. Abolition societies.
10. Nat Turner's insurrection.
11. "Gag Rule."
12. The annexation of Texas.
13. The Mexican war.
14. The Wilmot proviso.
15. The "omnibus" bill or compromise of 1850.
16. The underground railroad.
17. The Kansas-Nebraska act.
18. Anti-slavery parties.
    - A. Abolition.
    - B. Liberty.
    - C. Free soil.
    - D. Republican.
19. "Uncle Tom's Cabin" and "The Impending Crisis."
20. The Dred Scott decision.
21. Lincoln-Douglas debates.
22. Lincoln elected President.
23. Secession of Southern states—war.
24. The emancipation proclamation.
25. Thirteenth, fourteenth, and fifteenth amendments.

CIVICS.

Interpretation comes through analysis, and to that end an outline is valuable. The study of civics should mean more than a knowledge of the separate parts of the constitution; it should include an appreciation of the structure and nature of the document from which is drawn the great principles of democracy, and a knowledge of its actual application in practice. Three main questions should be before the student and applied to each article, section and clause: First, What does it say? Second, What does it mean? Third, Explain its use, past and present.

Any text on civil government will be of some help. In addition to the adopted text, the outline is drawn from Ashley, "American Government," new and revised edition (The Macmillan Co., Chicago); Forman, "Advanced Civics," The Century Co., New York; Rush, "Constitution in Outline, with Questions and Answers," E. E. Rush, Kansas City, Mo.

SELF-GOVERNMENT.

"He that ruleth his spirit is better than he that taketh a city."—BIBLE.

I. Self-control.
   1. The will directs action.
   2. A choice of right or wrong must be made.

II. Self-control can be cultivated.

III. The reward of doing right.

IV. Self-government the foundation of all government.

V. Name a fault opposed to each of the following virtues: Courage, industry, cheerfulness, liberality, tolerance.

VI. Arrange the following in the order of their importance: Honesty, modesty, patience, reverence, truthfulness, liberality.

VII. Arrange the following faults, placing the one you dislike most first: stubbornness, cruelty, jealousy, anger, tardiness, hypocrisy.

FIRST DIVISION.—*History and Explanation.*

I. GOVERNMENT.

1. Basis.
   a. Theoretical.
   b. Actual.
2. Characteristic feature.
3. Definition.
4. Conclusion: Government cannot be forced by theory; it is a growth of man's social nature, and we find it changing as his conditions change.

II. CIVIL GOVERNMENT.

1. Its origin.
   a. In Northern Germany.
   b. In England.

2. Its growth in America.
   a. Transplanted from England.
   b. In the colonies.
   c. In the States.
   d. In the Nation.
   e. The purpose.
   f. Definition.
3. *Conclusion:* When civil government is properly organized and administered it produces wholesome laws and mutual advantages for those who come under its rule.

III. FORMS OF CIVIL GOVERNMENT.

A.—As to time:

1. Ancient.
   a. Monarchy (the rule of one).
   b. Aristocracy (the rule of a few).
   c. Democracy (the rule of many).
2. Modern.
   a. As to power.
      1. Federated.
         a. States banded for mutual protection, each state retaining its original power.
         b. Banded States.—States united to form a stronger government, each state yielding a portion of its original power to the general government.
      2. Centralized: each state yielding all authority to the central government.
   b. As to operation.
      1. Pure democracy (local).
      2. Representative democracy (local and national).

B.—As to expression:

1. Unwritten.
   a. Disadvantages.
   b. Advantages.
2. Written.
   a. Disadvantages.
   b. Advantages.

C.—Conclusion:

That form of government is the best under which a people attain the highest happiness and usefulness in the arts of a Christian civilization.

IV. THE GROWTH OF GOVERNMENT FROM THE EARLY COLONIAL TIMES TO 1789.

1. Claims of European nations in America.
   a. Spain.
   b. France.
   c. England.
2. Supremacy of England in 1763.
   a. Determined the dominant race for America.
   b. Determined the dominant religion for America.
   c. Determined the dominant government for America.
3. England established government in America.
   a. Chartered government.
      1. Its origin.
      2. Its nature.
   b. Proprietary government.
      1. Its origin.
      2. Its nature.

3. England established government in America—*continued.*
   c. Royal province government.
      1. Its origin.
      2. Its nature.
4. Revolutionary states organized government.
   a. The state constitution.
      1. A written document.
      2. Defines the limits of authority.
      3. Distributes the authority.
         a. To the legislative.
         b. To the executive.
         c. To the judicial.
   b. The local units.
      1. The county.
      2. The township.
      3. The school district.
   c. The articles of confederation.

THESE ARTICLES WERE NOT SUITABLE FOR A STRONG GOVERNMENT.

      1. Defective in organization.
         a. Legislative.
            1. Term too short.
            2. Service limited.
            3. State could recall.
            4. Salary paid by the state.
            5. Had no authority over commerce.
      2. Defective in operation because no power to punish individuals.
         a. Taxation—no power to collect.
         b. Armies and navies—no direct powers.
         c. Could not enforce—simply advise.
      3. *Conclusion:* The articles of confederation was a form of law which the states were supposed to respect and obey.

5. The United States of America established the present constitution in 1789.

THIS CONSTITUTION IS SUITABLE FOR A STRONG GOVERNMENT.

      1. Power in organization.
         a. Legislative.
            1. Length of term reasonable.
            2. Service unlimited.
            3. Membership beyond recall.
            4. Salary paid from United States treasury.
         b. Executive—with constitutional powers.
            1. Civil.
            2. Military.
         c. Judicial—with highest legal powers.
      2. Power in the operation of government.
         a. Taxation—can collect.
         b. Army and navy—can create.
         c. Execute the laws.
      3. *Conclusion:* The constitution of the United States is an instrument of law, operative upon the several states and the people within the states collectively and individually.

V. DEFINITIONS AND GENERAL PRINCIPLES.

1. Define state; sovereign state; dependent state.
2. Define United States constitution; state constitution.
3. Elements of weakness.
   a. In a written constitution.
   b. In an unwritten constitution.

4. When does the right of revolution exist?
5. The constitution: How framed? How ratified?
6. Compare the articles of confederation and the present constitution.
   a. In organization.
   b. In operative powers.
7. What is the supreme law? (Art. VI: 2.)
8. Twelve important events in the growth of American government from 1763 to 1789.
   a. The treaty of Paris, 1763.
   b. The Stamp-act congress, 1765.
   c. The first continental congress, 1774.
   d. The second continental congress, 1775.
   e. The declaration of independence, 1776.
   f. The battle of Saratoga, 1777.
   g. The articles of confederation, 1781.
   h. The peace of Paris, 1783.
   i. The Alexandria convention, 1785.
   j. The Annapolis convention, 1786.
   k. The Philadelphia convention, 1787.
   l. The present constitution, 1789.

SECOND DIVISION.—*The Constitution in Outline.*

PREAMBLE.—Memorize.

I. ARTICLE I.—LEGISLATIVE POWER.

A.—Organization of Congress.

(When possible, all answers should be verified by article, section and clause of the constitution.)

1. House of representatives.
   a. Composed of.
   b. Elected by.
   c. Qualifications.
      1. Age.
      2. Citizenship.
      3. Inhabitancy.
   d. Fixing the ratio.
   e. Representative at large.
   f. Number.
      1. The maximum allowed.
      2. The minimum required.
      3. The actual number.
   g. The salary and perquisites.
   h. The term.
   i. Vacancy.
      1. How created.
      2. How filled.
   j. Officers.
   k. Sole power.
   l. The duty of a representative.
2. The senate.
   a. Composed of.
   b. Elected by.
   c. Qualifications.
      1. Age.
      2. Citizenship.
      3. Inhabitancy.
   d. The number.
   e. Salary and perquisites.

2. The senate—*continued.*
   f. The term.
   g. Vacancy.
      1. How created.
      2. How filled.
   h. The officers.
   i. Sole power.
   j. The duty of a senator.
3. Essential for self-preservation.
   Each house decides—
      a. Who are elected to membership.
      b. The rules for its proceedings.
      c. The punishment for disorder.
      d. When to expel a member.
      e. Who may be its officers, except as to the president of the senate.

B.—Congress: Its Powers, Prohibitions and Operation.

A. POWERS.
   1. *To raise revenue.* (I:8:1.)
      a. By taxation.
         1. Direct.
            a. Capitation.
            b. Land.
            c. Personal property.
         2. Indirect.
            a. Duties—specific, advalorem.
            b. Excises—specific, advalorem.
      b. By borrowing money. (I:8:2.)
      c. Give a historical account of the following:
         1. First revenue bill, 1789.
         2. Potective tariff, 1816.
         3. Canadian reciprocity, 1911.
         4. In what way are these measures related to I:8:1?
   2. *To regulate commerce.* (I:8:3.)
      a. Interstate Commerce Commission.
         1. Its organization.
         2. Its powers.
         3. Its service.
      b. Give historical account of the following:
         1. The embargo act, 1807.
         2. The nonintercourse act, 1809.
         3. Antitrust laws, 1890, and recent supreme court decisions thereon.
   3. *To regulate naturalization.* (I:8:4.)
      a. Citizenship.
         1. Constitutional definition. (Am. XIV:1.)
         2. The international rule.
         3. Classes.
            a. Natural born.
            b. Naturalized.
      b. Plan to determine citizenship.
         Persons answering "Yes" to any one of the following questions are citizens of the United States:
         1. Were you born in the United States?
         2. Have you taken out naturalization papers?
         3. Was your father an American citizen before you became of age?
         4. Were you a citizen of any territory annexed to the United States having a treaty clause providing for citizenship?

A. POWERS—*continued.*

3. *To regulate naturalization.* (I:8:4.)
   - *b.* Plan to determine citizenship.
     5. Is your husband a citizen of the United States?
     6. Have you served one year in the regular army or navy and received an honorable discharge therefrom?
   - *c.* Methods of naturalization.
     1. The five-year process.
        - *a.* The times required.
        - *b.* The evidence required.
        - *c.* Who issues the papers.
     2. The marriage process.
     3. By the annexing of territory.
        - *a.* When terms are stated.
        - *b.* When no mention is made concerning citizenship.
     4. The military process.
     5. The "renewal of domicile" process.
   - *d.* Important naturalization acts.
     1. The continental congress, 1776.
     2. Congress in 1790.
     3. Congress in 1795.
     4. Congress in 1798.
     5. Congress in 1802.
     6. Congress in 1882.
   - *e.* Why should an alien desire to become a citizen of the United States?

4. *Bankruptcy.* (I:8:4.)
   - *a.* A bankrupt is one who has been declared by a court to be owing more than he can pay.
   - *b.* Purposes.
     1. Distribution of property.
     2. Discharge from present debts.
   - *c.* Kinds.
     1. Voluntary.
     2. Involuntary.

5. *Money and coinage.* (I:8:5.)
   - *a.* United States money is a measure of value expressed in coin.
   - *b.* Money.
     1. Metal.
        - *a.* Gold—various denominations.
        - *b.* Silver—various denominations.
        - *c.* Nickel.
        - *d.* Copper.
        - *e.* Locate the mints.
     2. Paper.
        - *a.* Gold certificate.
        - *b.* Silver certificate.
        - *c.* United States notes.
        - *d.* Treasury notes.
        - *e.* National bank notes.
        - *f.* What gives value to each of these several issues?

6. *Counterfeiting.* (I:8:6.)
   - *a.* Consists in—
     1. Manufacture.
     2. Circulation; or having in possession, with intent to circulate, spurious coins or securities.

A. POWERS—*continued.*

6. *Counterfeiting.* (I:8:6.)
   - *b.* Penalties.
     1. Fine.
     2. Imprisonment.
   - *c.* What are securities?
   - *d.* What are current coins?
   - *e.* Will you include stamps and money orders in your definition?

7. *Post offices.* (I:8:7.)
   - *a.* Foreign mails.
     1. Carriage.
     2. Postage.
   - *b.* Domestic service.
     1. Presidential offices—those paying $1000 or more.
     2. Minor offices—paying less than $1000.
     3. Post roads—designated by Congress.
        - *a.* Wagon roads.
        - *b.* Waterways.
        - *c.* Railroads.
   - *c.* Postage.
     1. Principles.
        - *a.* Equal rights of all to use the mail service.
        - *b.* Secrecy of the mails.
        - *c.* Low postage.
   - *d.* Classes of mail.

     First class: letters, postals and all matter sealed against inspection.

     Second class: newspapers and publications issued as often as four times a year.

     Third class: books, manuscripts and seeds.

     Fourth class: merchandise not included in the other lists and limited to four-pound packages.
   - *e.* Free delivery.
     1. In cities of 10,000 population, or over.
     2. Where receipts are $10,000 or over.
     3. In country communities where routes have been established.
   - *f.* Development in the service. Give historical sketch from 1782 to the present.
   - *g.* In what way are the following topics related to the post-office clause?
     1. The Cumberland road of 1807.
     2. International Postal Union of 1891.
     3. Ownership of telegraph lines in 1866.

8. *Patents and copyrights.* (I:8:8.)
   - *a.* Purpose of the clause.
   - *b.* How is the purpose promoted?
   - *c.* Patent.
     1. How obtained.
        - *a.* Make oath that he is the inventor.
        - *b.* Submit descriptions and drawings.
        - *c.* The article must be new, unused and useful.
     2. Expense.
        - *a.* A fee of $15 must be sent with the application.
        - *b.* An additional fee of $20 must be paid when patent is granted.
     3. Results.
        - *a.* Sole right to make and sell.
        - *b.* Good for how long?

A. POWERS—*continued.*

8. *Patents and copyrights.* (I:8:8.)
   - *c.* Patent.
     4. Principles.
        - *a.* Fee is small.
        - *b.* Patents recorded for comparison.
        - *c.* Patents are for a brief term.
        - *d.* Exclusive right to use and sell.
   - *d.* Copyright.
     1. How obtained.
        - *a.* Give name of author.
        - *b.* Copy sent to librarian of Congress.
        - *c.* Publication must bear the date of the copyright issued.
     2. Benefits secured.
        - *a.* Exclusive rights to publish—for how long?
        - *b.* At home and in some foreign countries.

9. *The war powers.* (I:8:10-16.)
   - *a.* Suppress piracy.
   - *b.* Declare war.
   - *c.* To raise and support armies.
   - *d.* To provide and maintain a navy.
   - *e.* Regulation of the army and navy.
   - *f.* Calling forth the militia.
   - *g.* Organizing and disciplining.

10. *The property clause.* (I:8:17.)
    - *a.* Where have our national congresses held sessions—temporary and permanent capitals.
    - *b.* Exclusive legislation over what?

11. *The elastic clause.* (I:8:18.)
    - *a.* This clause gives rise to what two constitutional constructions?
    - *b.* Apply the meaning of this clause to the following:
      1. The first United States bank, 1791.
      2. The embargo act, 1807.
      3. Purchase of Louisiana, 1803.
      4. Protective tariff of 1816.
      5. The Philippines acquired, 1898.

B. PROHIBITIONS.

In an effort to protect the rights and liberties of the people, the constitution prescribes some prohibitions—

1. *On Congress.* (I:9.)
   - *a.* Absolute.
     1. No bill of attainder shall be passed.
     2. No *ex post facto* law shall be passed.
     3. No tax shall be laid on exports from any state.
     4. No preference to certain ports.
     5. Vessels from state to state shall not be taxed.
     6. No title of nobility shall be granted by the United States.
   - *b.* Conditional.
     1. Clause of article I, section 9, limited in time and taxation, but is now obsolete.
     2. Writ of habeas corpus conditioned on public safety.
     3. Capitation or other direct tax conditioned on I:2:3.
     4. Withdrawal of money—by appropriation bills.
     5. Titles of nobility—conditioned.
        - *a.* Nonofficeholders.
        - *b.* Officeholders, by permission of Congress.

B. PROHIBITIONS—*continued.*

2. *On States.* (I:10.)

a. Absolute: A state is forbidden—

1. To make a treaty.
2. To make an alliance.
3. To form a confederation.
4. To grant letters of marque.
5. To coin money.
6. To emit bills of credit.
7. To make anything but gold and silver tender in payment of debts.
8. To pass any bill of attainder.
9. To pass an *ex post facto* law.
10. To pass a law impairing the obligation of a contract.
11. To grant titles of nobility.

b. Conditional.

1. Import duties.
2. Export duties—both conditioned on necessity and subject to revision by Congress.
3. To keep troops.
4. War supplies.
5. To make agreements with other states.
6. To engage in war.
7. To make agreements with foreign nations.

All conditioned on emergency and consent of Congress.

C. OPERATION.

1. *Plan for law-making.* (I:7.)

a. A bill is a proposed law.

b. All bills for raising revenue shall originate in the house of representatives.

c. Before any bill becomes a law it shall be approved by any one of the following methods:

1. *a.* Passed by majority in each house.
   b. Signed by the President.
2. *a.* Passed by majority in each house.
   b. Vetoed by the President.
   c. Repassed by two-thirds majority in each house.
3. *a.* Passed by majority in each house.
   b. Not signed or returned in ten days, Sundays excepted, unless Congress adjourns before the ten days expire.

2. *The committee system.*

a. Appointments.

b. Methods.

1. Logrolling.
2. Filibustering.
3. Pairing.

c. Advantages.

d. Disadvantages.

e. Discuss the possibility of maintaining our present form of government without the committee system.

II. ARTICLE II.—EXECUTIVE DEPARTMENT.

Vested Power. (II:1:1.)

THE EXECUTIVE POWER SHALL BE VESTED—

A. In a President of the United States.
   1. For a term of four years.

B. And with the Vice President, shall be elected as follows:
   1. The college method. (II:1:2.)
      a. Election of electors: how? when?
      b. Number of electors.
      c. Who may not be an elector.
      d. Duty of electors. (Am. XII.)
         1. Meet: where? when?
         2. Vote: how? for whom?
         3. Lists: how made? how disposed of?
      e. President of the Senate.
         1. The opening of the lists.
         2. The counting.
         3. The result.
   2. The house-and-senate method. (Am. XII.)
      a. President.
         1. Chosen by.
         2. Candidates: how many?
         3. Voting.
         4. State power.
         5. Quorum.
         6. Necessary to a choice.
      b. Vice President.
         1. Chosen by.
         2. Candidates: how many?
         3. Voting.
         4. State power.
         5. Quorum.
         6. Necessary to a choice.

C. Qualifications for the President. (II:1:4.)
   1. Age.
   2. Citizenship.
   3. Inhabitancy.
   4. Am. XIV.
      a. Not holding any other office.
      b. Not guilty of disloyalty.

D. Vacancy: created by—
   1. Expiration of term.
   2. Death.
   3. Temporary inability.
   4. Impeachment and conviction of—
      a. Bribery, treason, misdemeanors.

E. Vacancy filled by—
   1. Election.
   2. Vice President.
   3. Cabinet. (See succession law).

F. Salary.
   1. Constitutional provision.
   2. The law.

G. Oath of office. (II:1:7.)

H. Powers.
1. Military. (II:2:1.)
2. Civil. (II:2 and 3.)
a. Legislative.
1. Send messages to Congress.
2. Sign or veto bills.
3. Call extra session of Congress.
4. Adjourn Congress when the Houses fail to agree to adjourn.
b. Executive.
1. Sole powers.
a. Commander-in-chief of army and navy.
b. Demand reports.
c. Appointment to some inferior offices.
2. Shared powers.
a. To make treaties.
b. To appoint—
1. Diplomats.
2. Judges.
3. Some civil service.
c. Judicial power.
1. Pardon.
2. Amnesty.
3. Reprieve.
4. Commutation.
5. Parole.

I. Duties.
1. The President at all times must himself be governed by law.
2. He must execute the laws.
What two means to that end has he at his command?
3. Recommend measures to Congress.
4. Receive foreign representatives.

The cabinet is a strong arm of the executive, yet it rests upon narrow constitutional grounds. (II:2.) The work of the cabinet is sufficiently set forth in Boynton, ch. XII.

III. ARTICLE III.—THE JUDICIAL DEPARTMENT.

A. *Organization.* (III:1:1.)
1. One supreme court.
2. Inferior courts.

B. *Appointment of judges.*
1. By President with consent of Senate.
2. During good behavior.

C. *Salary.*
1. Constitutional statement.
2. Present amount.

D. *The courts.*
a. Regular.
1. Supreme.
a. Time of meeting.
b. Number of judges.
c. Original jurisdiction.
d. Appellate jurisdiction.
2. Appellate courts.
a. The number of courts.
b. Held by what judges.
c. Purpose of the court.
d. Its jurisdiction.

D. *The courts—continued.*
   a. Regular.
      3. District courts.
         a. The present number.
         b. A district is either a state or a part of a state.
         c. Its jurisdiction.
         d. Cases, where brought.
      4. The commerce court.
         a. Appointment of judges.
         b. Jurisdiction of the court.
   b. Irregular.
      1. Court of claims.
         a. Where held.
         b. Judges.
         c. Purpose of the court.
      2. District of Columbia court.
         a. Judges.
         b. Jurisdiction of the court.
      3. Territorial courts.
         a. Where established.
         b. Judges—tenure of office.
         c. Jurisdiction of the court.
      4. Consular courts.
         The judicial duty of a consul may be to hold court for any one of the following reasons:
         a. To examine for crime committed on the high seas.
         b. To hear complaints of seamen.
         c. To reclaim deserters.
         d. To extend relief to destitute seamen.
         e. To probate wills.
         f. To conduct a trial in half-civilized countries when an American citizen is party to the suit.

IV. ARTICLE IV.—THE RELATION OF STATES.

A. To each other.
   a. Analyze the "full faith and credit" clause.

B. To the citizens.
   a. Privileges.
   b. Immunities.

C. To territory.
   a. Control.
   a. Admit to statehood.
      1. Methods.
         a. Discover three processes.
      2. What states have been admitted?

D. Historical topics.
   In what way are the following related to the general subject?
   a. The Missouri compromise, 1820.
   b. The compromise of 1850.
   c. The Kansas-Nebraska act, 1854.
   d. The Dred Scott case, 1857.

E. The preamble sets forth the purposes of the constitution; why was article IV written?

V. ARTICLE V.—AMENDMENTS.

A. How secured.

First method:

1. Proposed by two-thirds vote of each house of Congress.
2. Ratified by legislatures of three-fourths of the several states.

Second method:

1. Proposed by two-thirds vote of each house of Congress.
2. Ratified by conventions in three-fourths of the several states.

Third method:

1. Proposed by a convention called by Congress.
2. Ratified by the legislatures of three-fourths of the several states.

All amendments so far have been secured by the first method.

B. Amendments adopted.

The first ten, 1791: Personal rights.

The eleventh, 1798: Citizens cannot sue a state.

The twelfth, 1804: Changed method of electing president.

The thirteenth, 1865: Freed the slaves.

The fourteenth, 1868: Defines citizenship.

The fifteenth, 1870: Protects the right to vote.

What may be our sixteenth and seventeenth amendments?

C. Amendments prohibited.

1. Absolute.
   a. Before 1808. (I:9:1.)
   b. Method of direct tax. (I:9:1 and 4.)
2. Conditional.
   a. Affecting the equal right of a state. (I:3:1.)

VI. ARTICLE VI.—NATIONAL INTEGRITY AND LAW.

A. National debts.

All debts contracted and engagements entered into before the adoption of this constitution shall be as valid against the United States under this constitution as under the confederation.

B. Supreme law.

a. This constitution.
b. The laws of the United States.
c. Treaties made from 1789 to the present.

C. Persons under oath to support the constitution.

a. Those who make the law.
b. Those who enforce the law.
c. Those who interpret and apply the law.

VII. ARTICLE VII.—RATIFICATION.

A. Conditions:

The ratification of the conventions of nine states shall be sufficient for the establishment of this constitution between the states so ratifying.

B. Questions.

a. Over how many states was the constitution to be binding?
b. What original state did not help write the constitution?
c. When did this constitution go into full operation?

THE STATE CONSTITUTION.

1. Definition:

   The state constitution is a written instrument defining the powers of the state and distributing those powers to the various branches and departments thereof.

2. Branches.

   A. *Legislative.*

      a. House of representatives.
         1. Apportionment: how obtained?
         2. Members: number, term, chosen, qualifications.
         3. Districts.
         4. Officers of the house.

      b. Senate.
         1. Apportionment: how obtained?
         2. Members: number, term, chosen, qualifications.
         3. Districts.
         4. Officers of the senate.

      c. Sessions: time, number, quorum, adjournment.

      d. Duties and powers: journal, voting, salary.

      e. Law-making: Define a bill, a law; give the form of the enacting clause; readings, veto, publication.

      f. Locate on a map your congressional district; your state representative district; your state senatorial district.

   B. *Executive.*

      1. Make a list of seven executive officers.
      2. Qualifications required.
      3. Administrative officers and boards: their duties.
         a. Railroad Commissioners.
         b. State Board of Education.
         c. Board of Agriculture.
         d. Board of Equalization.
         e. Regents of state institutions.
         f. Board of Control.
      4. The election, term and duties of officers in the following:
         a. The county.
         b. The township.
         c. The city.
         d. The school district.

   C. *Judicial.*

      1. Supreme court.
         a. Judges: election, tenure, qualification, salary.
         b. Jurisdiction, terms of court.
      2. District courts: how organized, number, election of judges, salary, term.
      3. Probate courts: number, election of judges, qualification, salary, term, jurisdiction.
      4. Justice of the peace courts: number, election, term, salary, jurisdiction.
      5. City courts: created by what authority? number, term, election, salary, jurisdiction.
      6. Explain—
         a. Difference between civil and criminal case.
         b. Between damage case and an injunction case.
         c. Between grand jury and petit jury.

HYGIENIC PHYSIOLOGY.

To promote the physical welfare of the child is the principal aim in the teaching of school physiology. This includes a knowledge of conditions favorable to growth and conducive to health and bodily vigor. Hygiene and sanitation treat of these facts.

To teach the structure and functions of the body without hygiene and sanitation is to miss the highest value of the subject, whatever other values may be realized. On the other hand, to teach hygiene and sanitation without the elements of anatomy and physiology is to build on the sand, with no scientific basis. Let this foundation, then, be adequate to an intelligent understanding of hygiene, but do not give all of the time and effort of the class to laying the foundation.

Properly taught, school physiology is one of the most practical of utilitarian subjects, in that it teaches people how to safeguard health, the most valuable economic asset they possess. Health means power to work with body and mind, economy in cost of living, longevity and enjoyment.

The true scientific spirit should pervade the teaching of school physiology; it should be related to the every-day activities and conditions of life that affect health, and should be made concrete and personal. Moreover, the teaching of hygienic facts is not sufficient, for these facts must be transformed into hygienic actions, and hygienic actions into hygienic habits.

The following outline is, with some modifications, based upon Conn and Budington's Advanced Physiology and Hygiene. Hough and Sedgwick's The Human Mechanism, Ginn & Co., Chicago, has also been frequently consulted. The high-school library should contain the latest editions of Walter's Physiology, Fitz's Physiology and Hygiene, Martin's Human Body, Wilson's The Cell in Development and Inheritance, Davison's Human Body and Health, Bergey's Principles of Hygiene, Ritchie's Primer of Sanitation, and Hough and Sedgwick's The Human Mechanism, as reference books for pupils and teacher. Bulletins of State Board of Health will be sent regularly on request to the secretary. The teacher's library should include Gray's Anatomy and Hall's Textbook of Physiology, Normal and Pathological, or similar new advanced textbooks.

Every student of the normal-training course in physiology should keep a notebook embodying the essentials of this subject, including suggestive notes, outlines, diagrams, and records of demonstrations and experiments. Outlines in Physiology, by Prof. C. H. Nowlin, Kansas City, Mo., will be found helpful in this connection.

I. LIVING MATERIAL OF THE BODY

(See Conn and Budington, ch. I.)

1. Definition of terms.
   - A. Physiology.
   - B. Human physiology.
   - C. Anatomy.
   - D. Histology.
   - E. Hygiene.
   - F. Organism.
   - G. Organ.
   - H. Function.
   - I. Tissue.
2. Cells: the units of work and of structure.
   - A. Kinds of cells.
   - B. Structure of cells.
   - C. Description of protoplasm.
   - D. Activities of cells.
     1. Growth and repair.
     2. Division.
     3. Motion.
3. Unicellular and multicellular animals.
   - A. Division of labor.
   - B. Supreme importance of cells in the work of the body.

II. NUTRIENTS OR FOODSTUFFS.

(Conn and Budington, ch. II, III; Hall, ch. V.)

1. Terms to be understood: chemical elements; chemical compounds; foods; nutrients; condiments; solutions; emulsions.
2. Foods classified. (See Martin's Human Body.)
   - A. Proteids: examples and uses.
   - B. Carbohydrates: examples and uses.
   - C. Fats: examples and uses.
   - D. Inorganic salts and water.
3. Food values.
   1. Tables. (See Bulletin Kansas State Board of Health, February, 1911.)
4. Food habits.
   - A. Study of rations.
   - B. Habits of eating.
     1. Overeating.
     2. Frequency of eating; appetite as a guide.
     3. Vegetarianism.
     4. Proper use of condiments.
5. Cooking.
   - A. Three reasons.
   - B. Best methods.
6. Beverages.
   - A. Water: why use plenty.
   - B. Value and danger of other drinks.
   - C. Alcohol: undesirable effects.

III. FERMENTATION AND GERM DISEASES.

(Conn and Budington, ch. IV; Hough and Sedgwick, ch. XXX.)

1. Kinds of ferments.
   - A. Organized: yeasts, bacteria.
   - B. Unorganized: ptyalin, pepsin, etc.
   - C. Points of similarity and difference.
2. Bacteria.
   - A. Description: size, multiplication, forms.
   - B. Where found.

2. Bacteria—*continued.*
   C. Beneficial bacteria: many kinds.
   D. Harmful (pathogenic) bacteria: few kinds.
3. Immunity.
   A. Natural: all possess it to some extent.
      1. How increased of decreased.
   B. Artificial. (See Bulletin State Board of Health, May, 1911.)
      1. Acquired by having disease, vaccination, etc.
4. Methods of killing bacteria discussed.
   A. Sterilizing.
   B. Disinfecting.
   C. Pasteurizing.

IV. DIGESTION OF FOOD.

(Conn and Budington, ch. V, VI, VII, VIII.)

1. Object of digestion.
2. Salivary digestion, or digestion in the mouth.
   A. Mechanism.
      1. The teeth: sets, kinds, parts, materials, decay.
      2. The tongue: structure and uses.
      3. The salivary glands: location and use.
   B. Processes.
      1. Mastication: importance, Fletcherism.
      2. Secretion of saliva: how stimulated; quantity.
      3. Starch digestion: work of ptyalin; how long continued; how stopped.
   C. Diseases of mouth and throat.
      1. Tonsilitis: symptoms, treatment.
      2. Diphtheria: distinguished from tonsilitis; antitoxin treatment (see Bulletin, March, 1910; also, special Bulletin State Board of Health); quarantine.
      3. Mumps: often serious; isolate patient.
   D. Care of the teeth: keep clean; consult dentist.
3. Gastric digestion, or digestion in the stomach.
   A. Mechanism: the stomach.
      1. Location, shape, capacity.
      2. Coats, openings, valves.
      3. Gastric glands.
   B. Processes.
      1. Storage, peristalsis.
      2. Secretion of gastric juice influenced by appetite and psychic stimuli.
      3. Quantity and composition of gastric juice.
      4. Work of gastric juice.
         a. Of hydrochloric acid.
         b. Of pepsin.
         c. Of rennin.
4. Intestinal digestion.
   A. Mechanism: small intestine, large intestine, pancreas, liver.
      1. Location and structure of each.
   B. Processes.
      1. Muscular movements: peristaltic.
      2. Secretion of intestinal juice: composition.
      3. Work of pancreatic juice: action of trypsin; of amylopsin; of steapsin.
      4. Work of bile.
      5. Work of large intestine.
5. Absorption of food.
   A. By blood vessels: through the liver.
      1. All sugar.
      2. Most peptone, salts, acids and water.

5. Absorption of food—*continued.*
   B. By lacteals.
      1. All oil products.
      2. Little peptone, salts, acids and water.
6. Diseases of the intestinal tract.
   A. Summer complaint.
      1. Cause, treatment.
   B. Appendicitis.
      1. Probable causes: taking cold, constipation, sedentary habits, infection, weak organ.
      2. Treatment.
   C. Typhoid fever.
      1. Cause: typhoid bacilli.
      2. Germs found in water, milk, oysters.
      3. Flies carry the germs. (See Bulletin State Board of Health, April, 1911.)
      4. Prevention: care of food and drink supply; disinfect all that comes from the sick room.

V. THE BLOOD.

(Conn and Budington, ch. IX.)

1. Quantity of blood.
2. Composition.
   A. Plasma: composition and use.
   B. Red corpuscles: size, shape, color, origin, composition, use, fate.
   C. White corpuscles: size, shape, color, origin, composition, movement, use, fate.
   D. Platelets: size, shape, color, use.
3. Clotting: description, favorable conditions, purpose.
4. Diseases of the blood.
   A. Blood-poisoning.
      1. Cause: pus-forming bacteria, usually in a wound.
      2. Prevention: disinfect all wounds; cover with disinfecting ointment and sterile bandage.
   B. Malaria, ague.
      1. Cause: germs (protozoa) carried by mosquitoes.
      2. Prevention: protect sick person from mosquitoes; destroy breeding places of mosquitoes.
   C. Yellow fever.
      1. Cause: germs carried by mosquitoes.
      2. Prevention: same as for malaria.

VI. THE HEART AND BLOOD VESSELS.

(Conn and Budington, ch. X.)

1. The heart.
   A. Location, size, shape, coverings.
   B. Internal anatomy: auricles, ventricles, valves, septum.
   C. Regulation.
      1. Impulse to beat.
      2. Inhibitory influences.
      3. Acceleratory influences.
2. The arteries and veins: structure and functions.
3. The capillaries: structure and use.

VII. CIRCULATION OF BLOOD AND LYMPH.

(Conn and Budington, ch. XI.)

1. Causes of blood pressure.
2. Checking hemorrhages.
3. Regulation of the circulation.

4. Abnormal circulation.
   A. Fainting: Cause and treatment.
   B. Causes and results of "high pressure."
5. The Lymph.
   A. Source: plasma of the blood.
   B. Uses: nourish tissues and collect waste matter.
   C. Disposal: returned to the blood.
6. Location, function and use of lymph nodes.

VIII. RESPIRATION.

(Conn and Budington, ch. XII, XIII.)

1. The respiratory organs.
   A. The nose and pharynx: description.
      1. Reasons for breathing through the nose.
      2. Sense of smell: location and use.
   B. The trachea and lungs: structure and use.
   C. Diseases.
      1. Colds: caused by bacteria; induced by exposure, improper ventilation, clothing, bathing, exercise.
      2. Pneumonia.
         a. Usually follows a cold.
         b. Serious character: call physician.
      3. Tuberculosis.
         a. Cause: tubercle bacilli.
         b. Varieties.
         c. Means of checking tuberculosis. (See text, pp. 185 to 189, Bulletins State Board of Health.)
         d. Treatment: pure air, nourishing food, exercise, sunshine.
2. Mechanism and chemistry of respiration.
   A. Rib breathing and diaphragm breathing: need of large capacity.
   B. Changes in the air during breathing: oxygen, carbon dioxide, temperature, moisture.
   C. Breathing and exercise—"second wind."
   D. Ventilation.
      1. Necessity.
      2. Principles (six).
      3. Systems of ventilation (Davison).
      4. Rule: "ventilate."
   E. Treatment in cases of suffocation and drowning (Davison).
   F. The vocal organs: structure.
      1. Discussion of pitch, quality and loudness.
      2. Care of the voice.

IX. EXCRETION.

(Conn and Budington, ch. XIV, XV.)

1. Organs of excretion: list, with substances eliminated.
   These substances are waste products separated from the blood, and therefore do not include indigestible portions of food expelled from the intestine.
2. Anatomy of the kidneys.
   A. Number, size, location, shape.
   B. Structure: shown by diagram and studied by specimen of pig's kidney.
3. Action of kidneys in excreting urine: filtration of water and salts, and cell-selection of urea.

4. Diseases.
   A. Bright's disease.
      1. Failure of kidneys to excrete urea.
      2. Excretion of albumin.
      3. Consult physician.
   B. Diabetes.
      1. Excretion of sugar by kidneys.
      2. Faulty nutritive processes.
      3. Diet, little carbohydrate.
      4. Consult physician.
5. The skin.
   A. Structure.
   B. General functions.
   C. Glands.
      1. Sebaceous: location, description, work.
      2. Sweat: location, description, work, regulation.
   D. Hair and nails: care of each.
6. Regulation of body temperature: by lungs, skin, circulation and perspiration.
7. Care of the skin.
   A. Bathing.
      1. Need, frequency, kinds.
      2. Rule: "bathe."
   B. Clothing: quality and quantity for different seasons.
   C. Burns.
      1. Smother fire.
      2. Cover burn with oil or vaseline.
   D. Frostbites: warm slowly and keep cool.
   E. Pimples, boils, carbuncles.
      1. Treat antiseptically.
      2. Do not pick with the fingers.
      3. Protect with sterile covering.
      4. Those subject to pimples should use medicated soap.

X. THE SKELETON: BONES, CARTILAGES, LIGAMENTS.

(Conn and Budington, ch. XVI.)

1. Skeletons the pupils have seen.
   A. Outside skeletons.
   B. Inside skeletons.
   C. Mixed skeletons.

NOTE.—Every high school should be supplied with an articulated human skeleton. Pupils will bring a variety of bones to the class for comparison.

2. Functions of the skeleton.
3. Chemical composition of bone.
   A. In children.
   B. In adults.
4. Care of the bones.
   A. Habits and nutrition of child.
   B. Repair of broken bones.
5. Cartilage: structure and uses.
6. Joints.
   A. Structure.
   B. Classification.
   C. Sprains and dislocations: prevent inflammation; give rest or little exercise.
7. Care of the feet: proper shoes to wear.

XI. MUSCLES AND TENDONS.

(Conn and Budington, ch. XVII; Hough and Sedgwick, ch. XVII.)

1. Muscles the pupils have seen: the various colors of muscles in fowls, fishes, quadrupeds.
2. Tendons: studied in class, using such material as the leg of a chicken.
3. Muscles classified as to—
   - A. Structure.
   - B. Form.
   - C. Location.
   - D. Nerve control.
4. Conditions affecting efficiency.
   - A. Temperature.
   - B. Fatigue.
   - C. Nutrition.
   - D. Training.
5. Effects of use and disuse.
6. Exercise.
   - A. Physiological effects (eight).
   - B. Characteristics of a good exercise (five).
   - C. Corrective exercises for—
     1. Round shoulders.
     2. Drooping neck.
     3. Lateral curvature of spine.
     4. Lack of development of other parts.
   - D. Hygienic value of corrective exercises.
   - E. Value of plays and games.
   - F. Athletics, use and abuse.
   - G. Exercises for nervous coördination.
7. Diseases of muscles.
   - A. Tetanus.
     1. Caused by tetanus bacillus: germ from the soil introduced into flesh.
     2. Preventive measures.
        - a. Thoroughly disinfect the wound.
        - b. In case of unusual danger use antitoxin.
     3. Treatment: administer antitoxin early, in large doses. (See Bulletin Kansas State Board of Health, May, 1911.)

XII. THE NERVOUS SYSTEM.

(Conn and Budington, ch. XVIII.)

1. Terms to be understood: neuron, dendrite, axon, nerve fiber, nerve center, stimulus, reaction, motor, sensory, afferent, efferent, central, peripheral, reflex.
2. Central nervous system, consisting of—
   - A. Central organs: brain, cord, ganglia.
   - B. End organs: special sense organs and motor end plates in muscles.
3. Sympathetic nervous system, consisting of—
   - A. Ganglia.
   - B. Sympathetic nerves.
   - C. Plexures (about internal organs).
4. Structure of the brain and spinal cord.

5. Functions of the different parts.
   - A. Cerebrum.
   - B. Cerebellum.
   - C. Medulla.
   - D. Spinal cord.
6. The cranial nerves: general location and function.
7. The spinal nerves.
   - A. Classes, roots.
   - B. General function.
8. Reflex action.
   - A. Mechanism: reflex arc.
   - B. Advantages of reflex action: quick, correct, relief to brain.
   - C. Reflex action and habit.
9. Functions of the sympathetic system.
   - A. Control circulation.
   - B. Control secretion, excretion and digestion.
   - C. Harmonize action of various organs.
10. Care of the brain.
    - A. Need of exercise; kind and amount.
    - B. Rest and sleep necessary.
11. Diseases of the nervous system.
    - A. Idiocy: cause; training of feeble-minded.
    - B. Insanity.
      1. Causes: heredity, ill health, alcoholism, trouble, overwork, injury.
      2. Prevention: avoid causes, if possible.
    - C. Paralysis—cause: usually clot of blood.
    - D. Nervous prostration.
      1. Causes: continued mental strain, lack of exercise, improper nutrition.
      2. Treatment: complete rest and change of scene and occupation; proper exercise and diet.

XIII. STIMULANTS AND NARCOTICS.

(Conn and Budington, ch. XX; Hough and Sedgwick, ch. XX.)

1. Stimulants defined.
2. Tea, coffee, cocoa.
   - A. Active principle of each.
   - B. Best methods of preparing.
   - C. Benefits of use.
   - D. Dangers to the nervous, the dyspeptic, the young.
   - E. Dangers of the drug and patent-medicine habit.
3. Strychnine—caution: use only when prescribed by physician.
4. Narcotics defined.
5. Opiates: laudanum, paregoric, morphine, etc.; effects—habit.
6. Cocaine, choral: enslaving influence.
7. Alcoholic drinks classified: examples and strength.

8. Physiological action of alcohol.
   - A. False stimulation or exhilaration.
   - B. Inhibition of brain functions.
   - C. Alcohol and muscular work: experiments.
   - D. Alcohol and arteries: observations.
   - E. Alcohol and exposure to cold: danger.
9. Pathological conditions due to alcohol.
   - A. Acute.
     1. Mental.
     2. Bodily.
   - B. Chronic.
     1. Mental.
     2. Bodily: nervous system, heart, arteries, stomach, liver, kidneys.
10. Relation of intemperance to poverty; to crime; to insanity; to disease in general (Davison).
11. Tobacco.
   - A. A variety of effects.
   - B. Arguments against its use.
   - C. Our young men are being injured more by tobacco than by alcoholic drinks.

"Boys who use cigarettes seldom fail in later life; they have no later life."—DAVID STARR JORDAN.

XIV. ORGANS OF SPECIAL SENSE.

(Conn and Budington, ch. XXI, XXII.)

1. The eye.
   - A. Description, location and use of the principal parts.
   - B. Defects: their cause and remedy.
     1. Nearsightedness.
     2. Farsightedness.
     3. Astigmatism.
     4. Cataract.
   - C. Care of the eyes in regard to—
     1. Eye rest.
     2. Illumination of object.
     3. Flickering light.
     4. Glossy paper.
     5. Cleanliness.
     6. Removing foreign substances.
   - D. The expert oculist versus the "quack."
2. The ear.
   - A. Description and use of the outer, middle and inner ear.
   - B. Function of the semicircular canals.
   - C. Perception of pitch.
   - D. Deafness: causes and prevention.

XV. CONTROL OF PUBLIC HEALTH AND SANITATION.

(Conn and Budington, ch. XIII; Hough and Sedgwick, ch. XXVI to XXXV, inclusive.)

1. Factors determining public health.
   - A. Thickly settled communities.
   - B. Personal habits.
   - C. Climate.
   - D. Cleanliness of surroundings.
   - E. Mosquitoes, flies, fleas, rats.
   - F. Pet animals: cats and dogs.

2. Plan of campaign for public health.
   - A. Prevent spread of disease germs.
     1. By disinfecting.
     2. By quarantining.
     3. By care on the part of those who are sick.
   - B. Increasing individual resistance.
     1. By sanitary conditions of home and neighborhood.
     2. By instruction in hygienic living.
3. Preventable diseases: how spread and how prevented.
   - A. Tuberculosis.
   - B. Typhoid fever.
   - C. Diphtheria.
   - D. Scarlet fever, measles and whooping cough.
   - E. Smallpox.
4. The home.
   - A. Location: light and air.
   - B. The house.
     1. Furnishing.
     2. Cleaning: sweeping, dusting, vacuum cleaners.
     3. Rugs versus carpets.
     4. Sanitary cellar.
     5. Heating and ventilation.
     6. Lighting.
   - C. Water supply.
     1. Necessity for pure water.
     2. Location and construction of well (see Bulletin Kansas State Board of Health, January, 1911).
5. Sewage: systems of disposal.
6. Health officials.
   - A. Duties and authority.
   - B. Need of coöperation on part of public.

PSYCHOLOGY.

The problem of pedagogy is to lay down proper rules for education and these rules may come only from the history of education and from child study. The history of education shows what things and what theories have proved successful in school practice; child study points out the natural ways in which the mind develops, from which we deduce the laws of mental activity, and learn at what time the various powers of the mind appear. Hence the prime importance of the study of psychology for teachers.

In the very beginning it should be emphasized that the purpose of this half-year of psychology is by no means to make psychologists, in the technical sense of the word, but rather to make good teachers, and hence as many as possible of the illustrations used from day to day should be from the schoolroom and its problems. Such parts of psychology as have little bearing on teaching should be but lightly touched on, if at all. During the first days of the course the teacher should be prepared to show some of the practical bearings of psychology on pedagogy, and some of the more striking laws that will be dealt with later might well be brought up, such as the importance of every teacher's knowing of the different perceptual types of his children—visual, auditory, and motor. It is probable that each pupil will think himself fully as visual-minded as any other, but in every class of ten to fifteen probably one boy or girl will be found who will prove to be quite motor-minded. Right here the different ways of teaching spelling should have attention. Perhaps this example may suffice to show the way in which it is intended that the psychology should be taught throughout. No one ever learned this subject through a textbook, nor made a successful teacher of psychology, who did not really teach the subject rather than hear class recitations from day to day. The teacher should store up a fund of illustrations from actual experience, and should make continual use of some such book as Halleck's Psychology and Psychic Culture for additional illustrations, and of James's Talks to Teachers for the correct pedagogical applications of each chapter. Indeed, the teacher should never allow himself to begin a chapter in the text without having the corresponding chapter in the last mentioned book at his tongue's end.

Teacher and students should recognize at the beginning of the course that they are entering a new world, the subjective one, while all previous study in the school has been of objective things. There should be frequent practice in introspection, and throughout the entire course the teacher should allow no illustrations from the text to be given—if the text is not true to

the individual it is not good psychology for him. Instead, the pupil should always furnish his illustrations from his own experience. Some very simple text in experimental psychology, such as Seashore, will be of some use to the teacher, but no apparatus will be needed that cannot be supplied at home. One of America's greatest psychologists, when asked by a college president how much ought to be set aside for an elementary laboratory, answered: "Three thousand dollars a year for a psychologist, and a dollar a year for paper and pins."

During the whole course of this study seek at every point to develop the idea of the unitary character of the mind. The mind acts as a whole, though sometimes one phase happens to be emphasized, then another. At such times we say that we are perceiving, remembering, or reasoning, as the case may be. For purposes of study, indeed, we may single out a certain process, but all are interrelated and represented in every other. These correlations should be constantly held in mind. As an instance of this take apperception, which may profitably come in for consideration when dealing with perception, attention, interest, memory and volitional action.

Under sensation and perception bring out the part that sense experience plays in the development of the child and the need of large opportunity for the acquisition of sense material. Training in careful habits of observation will result in usable memory-images, whereas the lack of clear-cut perceptions seems to result in hampering mental efficiency all one's days.

One of the especial reasons for the inclusion of psychology in a normal course is that, if well taught, it constantly brings to mind that representation is of greater value in education than mere presentation. In other words, all consciousness is motor. In the very beginning stress should be laid on the fact that all thought goes over into action, and not a week of the course should be passed by without showing from some new point of view that "Whatsoever a man thinketh in his heart, so is he." Among other things, this means to the teacher that he will never bring to the pupil's attention a thought he does not want acted upon, such as rules beginning with "Don't"; and that he will never teach homonyms as such. There is as much real difference between "sale" and "sail" as if they did not sound alike. The teacher who preaches that school is a pleasant place and that the pupil ought to love it, and then keeps his pupils after school as a punishment, is using poor psychology.

In dealing with the chapter on "Feeling," the important thing for pedagogy is to remember that while repetition makes sensations keener and more delicate, it dulls and blunts the feelings. The wisdom of this is apparent in every walk of life. The physician and nurse become more and more skillful with every case they treat, and seem more and more callous to suf-

fering, but no one would care for the services of one who was affected by much attention of the sick in an opposite way. This means much in pedagogy. For instance, the teacher who continually threatens is never heeded, and he who helps his pupils so much that they always turn to him instead of becoming more and more independent is a poor teacher. It is true that the best teacher is he who makes himself unnecessary.

Give large place to the study of attention and its relation to other mental processes. Note that the key to an understanding of attention, and apperception also, is found in the study of the natural and acquired tendencies of the nervous system. The focal character of attention and the fact that it is a question of more or less consciousness can be easily brought out by simple illustrations. Children are never really inattentive. The teacher's problem lies in securing their attention to the right things, in gaining for the relatively uninteresting ideas of the school subjects a proportionate share of the child's conscious energy in competition with the large mass of ideas instinctively appealing to him. In the early years only passive attention is possible. It is unnatural for the child to hold to long-continued tasks, and the teacher will show his art in graduating the burden to the increasing power of the child. Almost the whole art of the teacher lies in his skill in making the active attention of the pupil turn into a passive attention, and through a good method, which means a right handling of interest and apperception, in turning forced attention into an acquired attention that shall be strong.

Bring out the relation of attention to will. When children are trained to do the tasks of the schoolroom, we say, and rightly, that their wills are being developed, but this manifests itself as an increase of power to give active attention. The school, perhaps even more than the home, furnishes the means for training the will, for giving the ability to make a sustained effort. This, of course, is the larger part of its function. Perhaps as important as anything in psychology is a right view of the will or action side of consciousness. Consciousness is motor. All ideas tend to result in action.

Life, and especially child life, is largely lived on the level of instinct. In great measure, the child in his development does repeat the history of the race. He has many instincts and natural interests which may be made useful in his development. The collecting or acquisitive impulse is one of these. The possibilities of play in education are far greater than are dreamed of by the uninstructed. There are a host of social instincts, such as imitation and suggestion, the acquiring of language, the gang instinct, rivalry, etc., which must be reckoned with in a scheme of education, for instincts are in one sense interests and have impelling power to sway the child for good or evil. Again, no truer insight into child life may be

gained than by a study of his egoistic impulses. It is here we reach a basis for dealing with questions of a disciplinary character.

The following outline follows the order of presentation of Professor Betts's "The Mind and Its Education," which will be used as the text:

1. The mind, or consciousness.
   - A. How we may come to know mind.
   - B. Its personal character.
   - C. Introspection the one means of study.
   - D. Consciousness like a stream.
     1. A wave means attention.
     2. Contents of the stream.
   - E. Three modes of activity: knowing, feeling and willing.
2. Attention.
   - A. Nature.
   - B. Always present in some form or other.
   - C. Effects: increase of efficiency.
   - D. Types of inattention; how remedied.
   - E. How secured:
     1. Involuntary.
     2. Nonvoluntary.
        a. Interest and nonvoluntary attention.
     3. Voluntary.
        a. Will and voluntary attention.
   - F. The habit of attention.
3. The brain and nervous system.
   - A. The machine through which the mind works.
   - B. Structure.
   - C. Central nervous system—brain and cord.
   - D. Peripheral nervous system—end organs.
   - E. Sensory and motor functions.
   - F. Dependence of the mind on the senses for its material.
4. Sensory and motor training.
   - A. Education dependent on both body and mind.
   - B. Efficiency of nervous system depends on development and nutrition.
   - C. Development though varied stimuli and untrammeled response.
   - D. The sensory-motor arc.
   - E. Good nutrition versus malnutrition.
   - F. Necessity for sleep and freedom from worry and overfatigue.
5. Habit.
   - A. A man is but a bundle of habits.
   - B. Habit-formation a method of economy.
   - C. One cannot prevent habits from forming.
   - D. Physical basis of habit.
   - E. Control of habits through our actions.
   - F. The part of habit in education.
   - G. Value and danger of even good habits.
   - H. Maxims for habit-forming.

6. Sensation and perception.
   - A. Mind constructs its world from sense stimuli.
   - B. How thought reaches still farther.
   - C. Qualities usually ascribed to objects really existent in mind.
   - D. Problem confronting the child; how he proceeds.
   - E. Perception of objects and of space.
   - F. Necessity of entering largely into world of material environment.
7. Mental imagery.
   - A. All present thinking dependent on past experience.
   - B. Past experience conserved by physical habit of mental images.
   - C. Galton's test of imagery.
   - D. Value of wide range of imagery.
   - E. Application to education; use in school subjects.
8. Memory.
   - A. Nature of memory.
     1. Physical basis.
     2. Retention and recall dependent on neural plasticity and activity.
     3. Images the material of memory.
   - B. Types of memory.
   - C. Laws of memory.
   - D. What constitutes a good memory.
   - E. Improvement of the memory.
   - F. The misuse of mnemonic devices.
9. Imagination.
   - A. Test of a good imagination.
   - B. Uses of imagination.
   - C. Application in science, art, every-day life, conduct, ideas.
   - D. Imagination limited by—
     1. Material available in form of images.
     2. Constructive ability.
     3. Definite purpose.
   - E. Cultivation and abuse of imagination.
10. Thinking.
    - A. Function of thinking is to discover relations.
    - B. The thinking of child and of adult.
    - C. Classification of knowledge accomplished through thinking.
    - D. Nature, formation and uses of concepts.
    - E. Judgment and reasoning, forms and uses.
    - F. Cultivation of thinking.
11. Instinct.
    - A. Instinct the result of race experience.
    - B. Through instinct racial habits are inherited by individual.
    - C. Modified through education and made into individual habits.
    - D. Ripening and transitoriness of instincts.
    - E. Human instincts of imitation, fear and play.
12. Feeling and its function.
    - A. An accompaniment of all mental processes.
    - B. Importance as a motive.
    - C. Feeling tone, or mood; how produced, and influence.
    - D. How our dispositions are formed; part played by temperament.

13. Interest.
    - A. A selective agency among our activities.
    - B. Influence in directing stream of thought.
    - C. Objective side of interest.
    - D. Dynamic phase of interest.
    - E. Immediate and remote interests; part they play as motives.
    - F. Danger of early specialization in our interests.
    - G. Interest and the will.
    - H. Interest and character.

14. The emotions.
    - A. Relation of instinct and emotion.
    - B. The physical side of emotion.
    - C. Control of emotions.
    - D. Desirable emotional balance.
    - E. Emotions as motives.
    - F. Danger from arousing emotions without giving opportunity for expression.
    - G. Emotional habits.

15. The will.
    - A. Concerns itself wholly with causing or inhibiting acts.
    - B. Various types of action.
        1. Physiological reflexes.
        2. Instinctive acts.
        3. Ideo-motor acts.
        4. Deliberative acts.
    - C. The image and the act.
    - D. Process of deliberation.
    - E. Emotional factor in decision.
    - F. Final test of power measured in attention.
    - G. Training of the will in common duties of life.

16. Self-expression and development.
    - A. Interrelation of impression and expression.
    - B. Many sources of impressions.
    - C. Various forms of expression.
    - D. Necessity for cultivating expression.
        1. Intellectual value of expression.
        2. Moral value.
        3. Religious value.
        4. Social value.
        5. Educational value.
    - E. Expression in the home and school.
    - F. Expression as related to character.

METHODS.

This outline is based on White's Art of Teaching.

1. Education.
   - A. What it is.
   - B. Relation of psychology and physiology to education.
   - C. Educational value of child study.
2. The ends of education.
   - A. What they are.
   - B. Their relation to methods and devices.
   - C. The proper test for all methods and devices.
3. Knowledge.
   (Two lessons.)
   - A. What it is.
   - B. The necessary attitude of the learner's mind.
   - C. The teacher as a stimulus to mental activity in the learner.
   - D. Connection between kinds of knowledge and methods of teaching.
   - E. The comparative value of school studies.
   - F. The thing learned versus the act of learning.
4. Skill in the school arts.
   - A. What it is.
   - B. How attained.
   - C. The maxim of Comenius; needs what modification? (Who was Comenius?)
5. Three fundamental processes in teaching.
   - A. What they are.
   - B. Purpose of each.
   - C. Their comparative value.
6. Relation of the learner to the thing to be learned and to the method of instruction.
   (Two lessons.)
   - A. Primary ideas and the objective method.
   - B. The indirect or Socratic method.
   - C. Pestalozzi's maxims. (Who was Pestalozzi?)
7. The direct or telling method.
   - A. Contrast with Socratic method as to kind.
   - B. Compare with Socratic method as to value.
8. Analysis and synthesis in teaching.
   - A. Define and illustrate each, making distinction perfectly clear.
   - B. Compare as to use and value.
   - C. Induction and deduction.
   - D. Define and illustrate each, making distinction perfectly clear.
   - E. Compare as to use and value; pitfalls to be avoided.
9. "Concentration and correlation."
   - A. Meaning.
   - B. Specific illustrations.
   - C. Value.
10. Drills.
    (Two lessons.)
    - A. Meaning.
    - B. When valuable, and when valueless or even detrimental.

    Tests.
    - C. Purposes of.
    - D. Distinguish clearly the various kinds, and give the specific end of each.
    - E. Modes of conducting tests, and the advantages and disadvantages of each.

11. Oral teaching.
(Two lessons.)
A. In primary grades.
B. Above third grade.
C. Preparation by the teacher.
D. Presentation by the teacher.
E. Reproduction by the class.
F. Reviews.

12. "Husking the thought" from textbooks.
(Two lessons.)
A. Relation between oral instruction and textbook study.
B. Oral instruction in connection with lesson assignment in textbook.
C. Comparative use of oral instruction and book study from primary grades through the high school. (See graphic illustration in White.) Reason for the difference.
D. Why pupils entering high school do not know how to study, and the remedy.

13. Individual and class instruction.
(Three lessons.)
A. Comparison as to use, value and abuse of each.
B. Why a certain amount of individual instruction is necessary in every class.
C. How class instruction may also be made individual instruction.
D. Comparison of rural and city schools as to individual and class teaching.

Methods of conducting class exercises.
E. The consecutive method.
F. The promiscuous method.
G. The simultaneous method.
H. Comparative value of each, with reasons.

14. Written work in primary grades.
A. Danger of too much; why.
B. When written work may be required with advantage.
C. Quality rather than quantity should be sought.

15. Examinations.
A. Their advantages and limitations as aids in the teaching process.
B. Their advantages and limitations as a basis for promotion.
C. They should subserve the interests of the pupils; should be a means and not an end.

16. The teaching of primary reading.
(Three lessons.)
A. Aim of the study.
B. Purpose of the recitation.
C. Methods of assigning lessons and conducting recitations.
D. If the method of the primary is based on form, bring out the manner of passing from the study of the forms of words to content.
E. Combination of methods. (Class should especially consult Arnold's Waymarks for Teachers.)

17. Reading above the third grade.
(Two lessons.)
A. Aim of the study.
B. Method of the recitation.
C. Nature and amount of help and preparation.
D. Bring out reason for change in method, if any.
E. What should be read.
F. Danger of too much reading, if any. (The class should supplement White's treatment of this topic by extensive reference to Roark, Parker, Sabin, Clark, and Arnold—both books—in the normal-training reference library.)

18. Primary language lessons.
(Three lessons.)
A. Ends to be reached.
B. Material to be used as a basis.
C. Methods.
D. Oral lessons.
E. Written lessons.
F. Incidental language training in connection with all school work.

19. The teaching of grammar.
A. Relation of grammar to reading; to language.
B. Aim of study.
C. Methods and principles of teaching. (The class should supplement White by reference to Dinsmore, Roark, and Sabin in reference library.)

20. The teaching of arithmetic.
(Four lessons.)
A. Nature of computing compared with analysis.
B. Number work as related to memory.
C. Analysis as related to imagination and reason.
D. Child psychology and first number methods.
E. Abstract as well as concrete numbers should be taught early.
F. Combinations by groups.
G. The Grube method; what; why unpedagogical.
H. The four fundamental processes.
I. Value of both oral and written exercises.
J. Mental arithmetic; how its advantages may be obtained without the use of a special textbook.
K. The value of the algebraic equation in arithmetic.

21. The teaching of geography.
(Three lessons.)
A. Aims.
B. Means.
C. Methods of study, of recitation. (In the development of this topic the class should consult Dinsmore, Sabin, Roark, and White's Elements of Pedagogy.)

22. The teaching of United States history.
(Two lessons.)
A. Biography.
B. Fiction based on history.
C. Records of events.
D. Interpreting relations—cause and effect.
E. Methods of study.
F. Methods of reciting. (The class should also consult in connection with this topic the four references mentioned under 21.)

23. Civics.
A. Aims.
B. Means.
C. Methods; making civics *real* to the pupils. (The class will have to depend largely on the reference library in the preparation of this lesson. Roark is especially recommended, and Sabin may be consulted.)

24. Physiology.
A. Aims.
B. Means.
C. Methods. (Roark, and Arnold's Waymarks for Teachers, are suggested as the basis for the preparation of this lesson.)

MANAGEMENT.

This outline is based on Seeley's New School Management; but upon the topics with which they deal constant reference should be made to White's School Management, Dutton's School Management, Dinsmore's Teaching a District School, Sabin's Common Sense Didactics, and McKeever's Psychologic Method in Teaching, in the normal-training reference library.

1. The personality and preparation of the teacher.
   (Four lessons.)
   - A. Responsibility of the teacher's position.
   - B. Disposition and temperament.
   - C. Bodily health.
   - D. Moral habits.
   - E. Acquired knowledge.
   - F. Attitude of teacher toward non-school interests.
   - G. Duties and rewards of the teacher. (See especially Dutton and White.)
2. Beginning to teach.
   (Two lessons.)
   - A. Securing a school.
   - B. Making a contract; Kansas law as to teacher's contracts and the breaking of them.
   - C. What to learn of a school before the first day.
   - D. What to do the first day.
3. The permanent program.
   - A. Order of subjects.
   - B. Recitation periods.
   - C. Study periods.
   - D. Intermissions.
   - E. Alternation. (See Course of Study for the Common Schools of Kansas, 1909, pages 11, 12, 13 and 14.)
4. Classification and grading.
   (Two lessons.)
   - A. Comparison of city and country schools as to grading.
   - B. Can country schools be graded? (Instructor should call attention of class to the State Course of Study for Common Schools, and so far as possible have them become individually acquainted with it.)
   - C. Advantages of graded schools.
   - D. Consolidation of schools. (Secure pamphlet on Consolidation from State Superintendent's office.)
5. Government.
   (Five lessons.)
   - A. Aim of discipline.
   - B. Rules.
   - C. Government by incentives.
   - D. Appeals to honor, self-respect, etc.
   - E. Aim of punishment; and principles governing its use.
   - F. Kinds of punishment. (See especially Dutton, White, and Dinsmore.)

6. School evils and how to treat them.
   (Three lessons.)
   A. Carelessness.
   B. Laziness.
   C. Tardiness.
   D. Irregularity in attendance.
   E. Tattling.
   F. Whispering.
   G. Lying, cheating, and stealing.
   H. Impudence.
   I. Rebellion.
7. School virtues and how to cultivate them.
   (Four lessons.)
   A. Neatness.
   B. Accuracy.
   C. Silence.
   D. Industry.
   E. Truthfulness.
   F. Conscienciousness.
   G. Politeness.
   H. Obedience.
8. The teaching of morals in school—
   (Two lessons.)
   A. By the example of the teacher.
   B. Informally by using incidents in the daily school life.
   C. Formally by specific lessons. (See especially White and Sabin.)
9. Cautions and admonitions to teachers as to—
   (Three lessons.)
   A. Use of sarcasm.
   B. Threatening and scolding.
   C. Keeping promises.
   D. Being hasty.
   E. Giving help.
   F. Dealing with dull children.
   G. "Seeing things."
   H. Inspiring reverence for things holy.
10. Incentives to school work.
    (Two lessons.)
    A. Emulation.
    B. Class rank.
    C. Prizes.
    D. Marking; why; how; when.
    E. The value of these stimuli as compared with subject matter itself. (See especially Dutton and White.)
11. Promotion.
    A. Purpose of.
    B. Frequency of.
    C. Basis of.
12. Examinations, tests and reviews.
    A. Examinations; characteristics of; educational value of; character.
    B. Tests; purpose; character.
    C. Reviews; when; why; how.

13. The recitation.
(Four lessons.)
   A. Purpose.
   B. Assignment of the next day's lesson.
   C. How the pupil should prepare for the recitation.
   D. How the teacher should conduct the recitation.
   E. The five "formal steps." (See especially Dutton, McKeever, and Sabin.)

   (Chapter XVII should be omitted.)

14. Duty of the teacher—
(Three lessons.)
   A. To his pupils.
   B. To the parents.
   C. To the community.
   D. To the school board.
   E. To his profession.
   F. To his successor.
   G. To himself.

   (Chapter XIX may be omitted.)

15. The school surroundings.
   A. The school grounds.
   B. The school building.
   C. The outbuildings.
   D. The interior of schoolroom; arrangement; furnishings; decoration; and ventilation.

ARITHMETIC.

I.—*Topics which Must be Taught.*

B.—*Pure Arithmetic.*—Give a good reason why each of the following arithmetical topics should be taught:

Notation and numeration; addition; subtraction; multiplication; division of whole numbers; of common fractions, and of decimals.

Bills and accounts; account keeping and balancing; percentage and interest and their commercial applications to gain and loss, discount, etc., and to promissory notes.

Squares, square roots, cubes, and simple cube roots. (Not the general process of extracting cube root.)

Mensuration Arithmetic.—Rational mensuration (1) of lines, (2) of surfaces, (3) of solids.

Land measure, longitude and time, scale drawing, square and cube root with blocks or diagrams.

Generalized Arithmetic.—General arithmetic enough to summarize the several arithmetical truths and to acquaint pupils a little with number notions and with literal number. Such signed number as arises in arithmetic studies as with the upward and downward of the thermometer scale. Forces acting forward and backward, upward and downward, etc.

Discuss the following principles of selection of arithmetical material. Whatever constitutes:

(1) An important interest of children.

(2) An important need of adult common life of which pupils can appreciate the value.

(3) A part of an important sequence or set of ideas.

(4) An interesting and valuable contribution to the mental nurture of children.

(5) An aid in giving children control of their powers for effective service to themselves and to the community.

(6) The major topics of arithmetic enumerated above and demanding such mastery as is possible with children.

(7) An essential part of general information and not too mature for children.

A.—Discuss the following formulation of the way all arithmetical topics should be taught:

Learning the arithmetic topic: (1) The informal use: (*a*) Occasional uses; (*b*) collated uses. (2) The formal study: (*a*) Graphic presentation; (*b*) symbolic presentation; (*c*) reflex-action step. Drill comes here. (3) The application of it: (*a*) The new idea alone; (*b*) the new idea with others.

II.—NOTATION AND NUMERATION.

Notation Defined as a Way of Writing, or of Recording, Numbers.

Numeration Defined as a Way of Reading, or of Speaking, Numbers.

A.—In teaching notation follow the steps (1) the idea, or the thing, (2) the name, (3) the symbol. Discuss.

Precisely what needs to be taught in (1) the Arabic notation. (2) The Roman notation.

B.—Notation developed: (1) In grades three, four and five, orally and through natural use. (2) Explicitly. (See pages 11 to 15.)

Numeration developed through use. Place and name; values of digits. Paragraph 7.

Periods. French, Roman and English notations. To train in reading numbers, read numbers that denote something. Paragraph 11. Inter-

pretation of Roman notation should begin on the right. Show how the principles of (1) addition, (2) subtraction, (3) multiplication, are employed in the Roman notations. In the Arabic notations.

PROBLEMS.

Solve problems 1 and 2, page 15. Interpret (1) DCD, (2) MDM, (3) MD, (4) MCMVIII, (5) II, (6) MCD, (7) MCCCC.

Suggest uses of Roman notation in pages of prefaces of books, in numbering chapters in books, on monuments, tombstones, and in works of art.

III.—ADDITION.

A.—In what grade should the use of the terms plus, minus, etc., for "and," "less," etc., begin? This means where should the "language of the science" begin to be taught?

How can pupil be made to feel that addition, subtraction, etc., are measuring processes?

How may multiplication be foreshadowed in addition.

B.—The ideas of addition, sum, addends, and the sign "plus" defined through use (see par. 15), and stated in simple language.

Convenient arrangement of work, pages 17 and 18.

Use only such devices of arrangement as visualize the thinking of the problem.

Advisability of using local reports, as suggested on page 19, in addition to, or supplementary to, problems 3 and 4.

Checking by adding in reverse order, page 22. Postpone the *rationale* of casting out the 9's.

Discuss: Checking by casting out the 9's does not save enough effort to justify teaching it in addition and subtraction; but it does for multiplication and division.

PROBLEMS.

Solve and check by casting out the 9's, a few of the suggested problems, pages 23 and 25. Fill out on a separate slip the blanks of problems 12, page 20; 13, page 21. Problems 1 to 11, pages 23 to 25. Problems 1 to 8, pages 25 to 26. Problem 3, page 83.

Develop a lesson on addition for a primary class. Give many such exercises as give some numbers that make up 15, 18, 21, 24, etc., putting the vague aggregate, or sum, before the pupil at first, to be defined through addition as a measuring process.

IV.—SUBTRACTION.

A.—In teaching the processes, addition should precede subtraction by a little; the addition and subtraction should be taught together, as $8 + 6 = 14$, followed at once by $14 - 8 = ?$ $14 - 6 = ?$ Discuss.

Long before addition and subtraction are finished, multiplication and division should be begun. Discuss this as to (1) practicability, (2) pedagogic soundness.

B.—The notions of subtraction: Subtrahend, minuend, difference and remainder developed through common-sense uses (pages 26 and 27), and stated in simple language.

Do not use the language of borrowing and carrying. It confuses beginners. Discuss.

Distinguish between difference and remainder. Problem 2, page 26, illustrates a case of difference. Problem 3, page 26, illustrates a case of remainder.

Check subtraction by adding subtrahend and difference or remainder, comparing the same with the minuend.

Give many additional problems, as $38 + 6 = 44$, following immediately with $44 - 6 = ?$ and $44 - 38 = ?$ thus bringing out the correlation of addition and subtraction.

PROBLEMS.

Solve and check the following: Problems 4 to 10, page 29; 3 to 9, page 31; 10 to 15, pages 31 and 32; 2 to 7, pages 32 and 34.

V.—MULTIPLICATION.

A.—Show how multiplication may be based on addition.

Show that multiplication is a kind of measurement; the multiplicand is the standard, the multiplier the times used, and the product the quantity to be measured.

Show the correlative phases of multiplication; *i. e.*, that 8 6's implies 6 8's.

B.—Multiplication developed through common-sense uses, resulting in clear and simple statements. Pages 35 and 36.

Arrangement of work. Page 37. The pedagogical function of mechanical arrangement is to visualize, and, in a sense, to concrete the logic of the problem.

Drill on tables thus: How much is 5×9 ? 9×5 ? $\frac{1}{9}$ of 45, or $45 \div 9 = ?$ $\frac{1}{5}$ of 45, or $45 \div 5 = ?$ etc. What is $6 \times x$, if x is 1, 2, 3, 7, 6, 4, 8, 5, 9 ? What is $9 \times x$, if x is 3, 2, 5, 8, etc.? Make the work brisk and snappy.

Make clear that multiplication by whole numbers is shortened addition.

Check multiplication (1) by casting out 9's; (2) by dividing the product by one factor; (3) by multiplying by factors of the multiplier. (Paragraph 35, pages 43 and 44.)

Checking trains in independence and self-confidence. Discuss.

Give enough fractional multiplication (see page 44, paragraph 30) to enable pupils to see that multiplication is something more than shortened addition.

Multiplying by 10, 100, 1000, 25, 50, 75, 500, etc., in short ways, page 42.

PROBLEMS.

Complete, if necessary, solve and check the following: Problems 5 to 16, page 45; 5 and 8, page 47; 17, page 48; 1 to 6, page 49.

VI.—DIVISION.

A.—When products are found at once for factors, as $6 \times 8 = 48$, follow at once with $\frac{1}{6}$ of $48 = ?$ $48 \div 6 = ?$ $\frac{1}{8}$ of $48 = ?$ $48 \div 8 = ?$ Discuss.

Distinguish between partition and division.

This distinction should not be made with children. Discuss.

B.—Division and terms defined through common-sense uses and stated in simple language.

Bring out the truth that division is both shortened subtraction and inverted multiplication. Pages 50 to 52.

The distinction between partition and division is not advisable with children. Discuss.

Short division taught. Page 53.

Convenient form. Page 53.

Long division taught. Pages 55 and 56.

Convenient form. Pages 56 to 58.

In short division, write the quotient below the dividend. In long division, above the dividend.

Check divisions by multiplying quotient by the divisor and comparing the product with the dividend.

Checking division by casting out the 9's saves so much burdensome labor that it should be used systematically here. Discuss.

PROBLEMS.

Solve and check the following: Problems 3, 5, 7, 10, page 54; 4, 5, 8, 9, page 59; 15, 16, 17, page 60.

VII.—CANCELLATION—TESTS OF DIVISIBILITY—FACTORING.

A.—Cancellation requires that a pupil first think through a problem, then formulate it. This is good thought training. Discuss.

How may a teacher keep cancellation from becoming a mere mechanical operation?

B.—Multiples of 10. Division by multiples of 10. Paragraphs 48 and 49.

Teach that dividing both the dividend and divisor by the same number does not affect the quotient.

Show the meaning of cancellation as a plan of balancing divisions against multiplications. Paragraph 49, page 62.

Tests for divisibility. Paragraph 50, page 63.

Forming preliminary estimates of about what results must be. Page 65, problems 2, 3, etc.

PROBLEMS.

Solve the following: Problems 10 and 11, page 64. Problem 2, page 69. Problems 1 to 8, pages 71 and 72.

VIII.—BILLS AND ACCOUNTS.

A.—Discuss the following educational reasons for teaching bills and accounts: (1) To teach systematization of data. (2) To familiarize pupils with forms that represent practical business procedure, and call for the business terms of "debit" and "credit." (3) To aid in strengthening the pupil's sense of values. (4) To impress the pupil with the out-of-school demand for arithmetical knowledge.

B.—The first attempts to teach bills and accounts should not deal with highly technical business forms, but should begin systematization in the direction of these forms. Discuss.

Solve problems 4 to 8, page 76, on the time sheet.

Make out cash accounts. Fill them in. Foot and balance them.

PROBLEMS.

Solve problems 5, 6, 9, page 78; 11 and 13, page 79; 1 to 7, pages 80 and 81, making out suitable bills; problems 1, page 81, and 2, page 82.

IX.—KINDS OF MEASUREMENT.

A.—Discuss the thesis: Measurement involves physical steps that run so closely parallel to the mental steps in numbering as to make measurement a better guarantee than counting of an understanding of number and number processes.

Measurement includes counting; for counting is only measuring with a qualitative unit; *i. e.*, with an individual. Illustrate and discuss.

Measurement should be habitually preceded by a preliminary estimate. Discuss.

B.—Measurement may be: (1) With an undefined unit giving rise to counting, addition and subtraction only. (2) With a definite unit of the same kind of magnitude as that to be measured, giving rise to the times idea and multiplication and division. (3) With a definite unit in a different sort of magnitude from the sort to be measured, giving rise to proportion, percentage and interest.

Measurement shows need for larger and smaller units, giving rise to compound number and fractional number.

PROBLEMS.

Solve, in all practicable cases, giving a roughly approximate estimate of about what the results must be, before the measurement or calculation: Page 87, 5, 8. Pages 88 and 89, 1, 4, 5, 8, 18. Pages 89 and 90, 25, 27. Pages 92 and 93, 17, 25, 28, 30. Page 95, 9, 12. Page 96, 8. Page 97, 15. Pages 98 and 99, 7, 11.

X.—COMMON FRACTIONS.

A.—Discuss the following reasons for teaching common fractions:

(1) The common fraction is the clearest and fullest expression of the measuring process.

(2) The simpler fractions are much needed in daily life.

(3) The study of common fractions furnishes most of the insight that a pupil gets into the number truths of arithmetic.

(4) The practical work of drawing to scale requires much use of fractions.

(5) To give needed drill in the fundamental operations with integers.

B.—Easy uses of simpler fractions, showing need for processes with fractions. Pages 109 to 115.

The fraction idea pictured as a tool for measuring.

The divided rectangles used are to be thought of as representing any sort of magnitude, not merely area. This trains in *re*-presentation, as well as functions as *presentation.*

Express simple fractions in different units. Pages 116 to 118.

Reducing fractions to different forms having equivalent values.

Need for G. C. D. Pages 119, 120.

Teaching the meaning of G. C. D. and how to find and use it. Pages 120 to 122.

Adding and subtracting fractions having the same denominator. Pages 131 to 135.

PROBLEMS.

Page 123, 2, 4, 5, 6, 7, 8, 10, 11, leading to need for learning how to add and subtract all kinds of fractions. Page 132, 4, 6, 7. Page 133, 4, 6, 8, 9.

XI.—COMMON FRACTIONS, CONTINUED.

L. C. M.—Multiplication and Division.

A.—For developing the operations with common fractions the divided rectangle is a most vivid and far-reaching means. Discuss.

The G. C. D. and L. C. M. should be taught only in their relation to the operations with fractions that call for them. Discuss.

Much attention should be given to factoring before the explicit teaching of common fractions.

B.—Reducing fractions to the same denominator, leading to common and to least common multiples.

L. C. M. developed and taught only in connection with necessities of teaching operations with fractions. Pages 127 to 129.

L. C. M. used. Pages 130, *et seq.*

Multiplication of fractions developed and taught. Pages 135 to 143.

Division of fractions developed and taught. Pages 143 to 150.

Complex fractions. Pages 150, 151.

PROBLEMS.

Pages 137, 14, 16, 17, 18. Page 139, 3, 4, 5. Page 142, 10, 11, 12. Pages 144, 145, 2, 4, 7, 9. Pages 145, 146, 1, 4, (1) and (2). Page 149, 6, 15. Page 151, 7, 8, 14, 15.

XII.—DECIMAL FRACTIONS.

A.—Decimal fractions should be first taught on the basis of the decimal notation, and then as a more practical way of working with all sorts of fractions. Discuss.

In the beginning stages of teaching the subject, decimals should be based largely on our monetary system and on the metric units. Discuss.

B.—Notation and mensuration of decimals developed and taught. Pages 162 to 164.

Reducing decimals to common-fraction equivalents. Page 164.

Addition of decimals. Pages 165, 166.
Subtraction of decimals. Pages 167, 168.
Multiplication of decimals. Pages 170, 171 and 174.
Reducing common to decimal fractions. Pages 180, 181.
For pointing quotients, see page 175, and page 240, problem 5.

PROBLEMS.

Page 164, 5. Page 166, 3. Page 169, 7. Page 171, 2. Page 173, 4. Page 175, 11. Page 176, 7, 3, 4. Page 177, 2, 3, 4, 5. Page 178, 7, 10, 14. Page 181, 7, 10, 12.

XIII.—DENOMINATE NUMBERS.

A.—Compound denominate numbers should be given a topical treatment to gather up and unify the pupil's knowledge of the subject. Discuss.

Compound number problems involving more than *three* units in a number should be discarded from the arithmetic work. Discuss.

B.—Have representatives of standard units present in teaching denominate numbers. Most of the fundamental denominate number forms and standards have been taught in connection with the multiplication tables in Books One and Two, Elementary Arithmetic.

Tables and necessary forms grouped for reference and memorizing. Pages 185 to 191.

Metric System. See historical note, page 201.

PROBLEMS.

Solve a dozen problems selected from the following: Page 192, 6, 7, top, and 4 and 8, bottom. Page 193, 6 and 7, middle, 3 and 4, bottom. Page 194, 4. Page 195, 3, 7 and 9. Page 196, 12, 31 and 6. Pages 197 to 201, 4, 17, 32, 54 and 77. Pages 205 to 207, 18, 25, 40 and 41.

XIV.—PERCENTAGE.

A.—The learner should be inducted into percentage (1) through whole numbers; (2) through common fractions; (3) through decimal fractions; and, finally, the ideas of percentage should be topically organized. Discuss.

B.—Connect percentage with whole numbers through questions such as "How many in 100?"

Connect percentage with common fractions as the fractional equivalent of percentage.

Connect percentage with decimals as another way of writing, or of reading, per cents.

Then organize percentage notions with reference to their own meaning—topical treatment. Use equation method of solving percentage problems.

Applications to (1) gain and loss. Page 212. (2) Meteorology. Page 214. (3) Geography. Page 217. (4) Commission. Page 220. (5) Discount. Page 221. (6) Marking goods. Page 223.

Is it likely to foster the sordid in children to confine all percentage work to money problems? Discuss.

PROBLEMS.

Solve a dozen problems selected from the following: Pages 207 and 208, 11, 17, 19, and 1 at bottom. Pages 210 and 211, 13, 17, 18, 2, 4, 8 and 10. Pages 212 and 213, 4, 9, 22 and 26. Pages 214 and 215, 1, 7 and 9. Page 216, 1 and 2. Pages 217 and 218, 3, 6, 10 and 13. Pages 222 and 223, 3, 4, 2, 4 and 8.

XV.—INTEREST—SIMPLE AND COMPOUND.

A.—Interest should be first related to percentage. Discuss.

Interest problems should be typical of real conditions. Discuss.

It is worth while to have a talk to the class on interest, simple and compound, by a business man. Discuss.

B.—Define interest as money to be paid for the use of money, and illustrate by such as: "For 4% interest, a man pays $4 for the use of $100 for one year." Bring out the point that problems of interest *for one year* are the same as percentage problems; and for more than one year multiply by the time in years.

Use the time first only as an integral number of years, then pass from easy to more difficult fractions of one year, including many fractions having a simple relation to twelfths of a year. Then pass to time as a whole number and a fraction of a year. Finally, to time expressed as years and months, and as years, months and days.

Teach 6 per cent method as means of avoiding the tedium of the general years, months, days procedure.

Show the relation of simple to compound interest. Study the forms on pages 225 and 305.

PROBLEMS.

Solve a dozen from the following problems: Page 224, 3, 8 and 9. Page 226, 6, 7 (4) and (9) 8, 10. Page 227, 15 (3), (6) and (7), 19, 22, 24, 30 (3) and (5).

XVI.—APPLICATIONS OF INTEREST.

Promissory Notes—Partial Payments.

A.—Have a business man talk to the class on promissory notes, or have a business man's son get facts from parents and report to class. Discuss.

Get business forms of canceled promissory notes for class use, and point out the important and essential data upon them. Discuss.

Inquire of a banker under what circumstances partial payments are made. Discuss.

B.—Draw notes, some with past dates, against Richard Roe or yourself. Name the date, the maker, the payee, the face of the note, the date of maturity, and find the "time to run."

Explain discounting notes.

Mention any circumstances under which partial payments have to be calculated in modern business. Inquire of some business man for such information. How must a note read to admit partial payments?

Have a talk before the class by a business man, on partial payments. Discuss.

PROBLEMS.

Page 231, 1 and 2. Page 232, 4 (2), and 2. Page 233, 3, 5, 6 (3) and (7). Page 235, 2 and 3.

XVII.—LAND MEASURE.

A.—Have pupils stake out or draw to scale *a square acre.* If staked out, have the sides, the perimeter and diagonals placed by pupils. Discuss. Show class how to draw perpendiculars and parallels. Discuss.

B.—Show by diagram how sections are divided by law. Pages 101 and 279.

Show by diagram how townships are divided into sections. Pages 102 and 279.

Explain the meaning of principal meridian, base lines, ranges, and the mode of numbering townships. Page 278.

Distinguish between lots and fractions of sections.

Have a talk to class by a surveyor. Discuss.

PROBLEMS.

Page 101, 2, 3, 6, 8 and 10. Page 102, 12, 13. Page 279, 1. Page 280, 2 and 3.

XVIII.—FORM WORK.

Scale Drawing and Mensuration.

NOTE.—References are here to the elementary book of the state texts.

A.—Have pupils draw to some easy scale a wall, or the floor of the classroom, or schoolroom, from their own measures, locating all regular objects properly upon the drawing. Discuss.

Make scale drawings of imaginary farms, lots, streets, etc. Discuss.

B.—Form work relating to lines. Pages 13 to 15 and 59. Glance over and solve some of the problems orally.

Form work relating to areas. Pages 16 and 17. To areas and cubical contents. Pages 66 to 67, 84 to 85. Solve some of the problems orally.

To areas and scale drawing. Pages 108 to 111. Solve some of the problems orally.

To areas. Pages 212 and 213. Solve some problems orally.

To solids. Pages 218 to 221. Solve some problems orally.

PROBLEMS.

Solve orally as many as possible of the following problems: Page 13, 4. Page 14, 1 to 10. Page 59, 1 to 10. Page 67, 5 to 10. Page 84, 1 and 2. Page 108, 1 to 4. Page 111, 1 to 10. Page 213, 1 to 10. Page 218, 1 to 6.

XIX.—FORM WORK, CONTINUED.

Scale Drawing and Mensuration.

NOTE.—References are to the Grammar School Arithmetic.

A.—Have pupils make scale drawings of school or home gardens. Discuss.

Make scale drawings of roads, street-car lines, etc. Discuss.

B.—After studying page 1, make a drawing to some convenient scale of the recitation room.

Make a scale drawing of a farm from assumed measurements and lay the farm out into fields.

Solve problems such as are given below on your own drawings.

PROBLEMS.

Page 3, problems 5, 9, 10 and 15. Page 7, oral work and 1 to 3. Page 25, 2 to 5. Page 39, 3. Pages 92 and 93, 18 to 23, 26 and 29. Page 114, 2 and 3. Page 115, 10 and 11. Page 157, 2 and 6. Page 181, 1. Page 248, 3. Page 274, 4. Page 275, 5 to 8. Pages 296 and 297, 3, 7 and 10.

XX.—LONGITUDE AND TIME.

A.—Use a croquet or tennis ball, or an apple, or orange, with a knitting-needle through it, holding the north pole properly directed, in teaching longitude. Discuss.

Standard time and time belts should be explained and taught. Discuss.

With aid of railroad time card send an imaginary traveler from New York to San Francisco, and compute from the card the actual time taken. Discuss.

B.—Give a good reason why longitude and time should be taught in arithmetic.

See reasons of lesson I.

Study through the oral work.

Define prime meridian, longitude, Standard time, and time belts.

Work out the table from the fact that 360 degrees correspond to 24 hours.

PROBLEMS.

Solve a dozen problems selected from the following: Page 268, 3. Page 269, 6, 7, 8, 9, 12 and 14. Page 270, 18. Page 272, 2, 5 and 7. Page 273, 8 and 10.

GEOGRAPHY.

1. In the room: (*a*) A large picture. (Primary Geography, pages 1, 87, 94, etc.) Learn the names for different parts of a picture. How many objects in each part? The most important object? (*b*) Study specimens to tell what is seen, such as a piece of coal, a leaf, grains, fruits, etc.

Describe the schoolroom, playground, the home garden.

2. *Outdoor Observation:* A tree; parts of the tree; fruit, etc. Visit a place near the schoolhouse and describe it carefully, such as a small field, a mill, a foundry, a store, a church.

Make and record observations of the weather.

3. *Local Geography Begun.*—An excursion farther away to observe type forms—land forms, like a hill, a valley; water forms, like a pond, a brook, a river, etc. (Primary Geography, pages 1-5.)

Methods.—Draw a map of a field observed. Tell in order objects noticed in the field. Visit other fields and report to teacher. Write out what is to be seen in a picture. Describe an apple, a horse. Draw a plan of the schoolroom (Primary Geography, page 15), school yard.

References.—Type Studies, McMurry; Home Geography, Fairbanks; Field Work in Nature Study, Jackman; Methods and Aids in Geography, King; Suggestive Lessons in Geography, King.

MAP MAKING AND READING.

1. Draw a plan of the schoolroom to scale; the yard. (Pages 15 and 16.) Study first the principal streets or roads near the schoolhouse. Make a map of the same on paper. Use in a general way a scale suitable, as, one inch to a quarter of a mile. Print a few names of streets or roads on the map. Place the schoolhouse in its proper position, also the church or farmhouse and other buildings.

2. Walk through the streets or along the roads and notice slopes, elevations, and general features of surface. Observe in what directions water flows after or during rain.

3. Make a second map, adding contour lines, each line showing levels five, ten or twenty feet apart. Explain the meaning of the lines. If the spaces between the contour lines were filled in with a different color for each space, what kind of land would be represented by each color? What does color mean on a physical map? Find the lowest point on the map; the highest. From the western side of the home town to the eastern boundary line, does the surface slope up, or down? What is the slope of a still body of water? Of a river? How does the land slope from the eastern boundary of Kansas to the western? What is the meaning of color on a political map? What shows how the land slopes on such a map? By what kind of lines are the mountains indicated?

Explain the meaning of ●, ⊙, 42°. Learn how to use the scale.

Explain the relief map of North America (Primary Geography, page 26). Make one of plasticine.

References.—Methods and Aids in Geography, King; Suggestive Lessons in Geography, King; Special Method, pages 1-41, McMurry; Government Maps by the Geological Survey, Washington, D. C.

READING AND JOURNEY GEOGRAPHY.

Use maps or globes to illustrate. (Primary Geography, Part III.)

1. Take an imaginary trip to Topeka, St. Louis, or Chicago. Study situation, on what water, size, peoples, streets, important buildings, great industries, commerce, growth, etc.

2. Read and talk over other journeys to New York, Washington, down the Mississippi, to London, Paris, Venice, St. Petersburg, up the Amazon,

across the Alps, through the Mediterranean, to Cairo, to Chinese and Japanese homes, to see village life in India, Australia and the Philippines.

Methods.—Write letters home from these places. Use railroad folders. Draw routes taken on journeys. Raised maps and raised globes.

References.—Special Method, pages 42-198, McMurry; Home Geography, McMurry; Picturesque Geographical Readers, King.

1. The Air.—Composition. Effect of heat. In motion. Evaporation. Condensation. Moisture in air. The circle of the rain. (Primary Geography, pages 5 and 6.) Rains, streams, oceans. [All in a very simple way.]
2. The four seasons studied. Different lengths of day and night. Different degrees of cold and heat; simple explanations given.
3. Direction—right and left. Rising and setting sun—shadow at noon. Compass.
4. Soil—loam, gravel, sand and clay; appearance and use of each. Crops.

Methods.—Take children into the yard at noon to notice length and direction of shadow; compare with compass. Excursions for material, such as soils. Observations of rain during a rainfall and its action on the ground. Measure rainfall by using a can or pail.

References.—Physical Geography by Dryer, Physical Geography Reader by Dodge, Child and Nature by Frye, Home Geography by Tarr, Talks about the Soil by Barnard.

GENERAL FEATURES OF THE EARTH.

1. A globe, a map, a section, hemispheres, continents, grand divisions, land and water hemispheres. Size of grand divisions. Plains, prairies, and the people upon them.
2. Study elevations, a range, a mountain like Pike's Peak, a valley like the Mississippi river valley. (Grammar Geography, page 91.)
3. Slopes. The coast. Coastal plain.
4. Tides. Currents. The Gulf Stream.

Methods.—Take the class to the top of a hill or along a stream. Take an imaginary trip to the top of a celebrated mountain, like Pike's Peak. An imaginary trip down the Kansas river, or the Mississippi river. Sketch the grand divisions in order of size. (See Grammar Geography, page 2.) Draw map of Gulf Stream. (Grammar Geography, page 12.) Give a lesson on the globe. Use maps freely.

References.—Other geographies, Mill's International Geography, Physical Geography by Gilbert & Brigham, Davis, Tarr, etc., Aspects of the Earth by Shaler, Suggestive Lessons by King.

LIFE.

1. *Vegetable Life* (page 12): Variety near home. Three plant zones. Trees in different zones or belts. Trees in Kansas. Difference in the appearance of a tropical and a temperate forest. Vegetation affected by heat, moisture, dryness, height. Six life regions.
2. *Animal Life* (page 14): Domestic animals. Wild animals near home. Affected by climate. Different animals in the polar regions, temperate, and tropical regions. Differences in habits. Six regions of animal life. Useful and harmful animals. Birds. Fish.
3. *Human Life* (page 14): Different races living near the school; in the town.

a. Caucasian race: Characteristics. Subdivisions of the White race. Noted men of each subdivision. Difference in habits of English and Americans; Germans and French, etc.

b. Black race: Peculiarities in looks, habits, ideas, etc. Noted representatives.

c. Yellow race. Brown and Red races. Map of the races. Religions. Governments.

Methods.—Describe wild animals near home. Describe domestic animals seen in the town. Draw race map, animal map, etc. Make a list of wild flowers and trees near home. Describe flowers raised in home gardens.

References.—The First Book of Birds, Miller; Ocean Wonders, Damon; The American Natural History, Hornaday; Our Native Trees, Keeler; Leaves from Nature's Story Book, Kelly; Bird Studies with a Camera, Chapman; Strange Peoples, Starr; American Indians, Starr; Big People and Little People of Other Lands, Shaw.

TRANSPORTATION.

1. BY WATER (page 16): Rafts, rowboats, sailboats; increase in size; seven-masted schooners; steamers; material—wood, iron, steel. Present length (700 feet). Good harbors.

By Rivers: Navigable. Fall line. Difference between rivers of Africa and those of Europe. North American and South American rivers.

By Canals: Important ones, such as the Erie and Welland. Drainage at Chicago. Panama; "Soo"; Suez; Manchester; Kiel.

Noted water routes in the United States. Atlantic routes; Pacific routes.

2. BY LAND: Wheelbarrows, jinrikishas, bicycles, automobiles, carriages, sleds. Steam railroads: Locomotives, air brakes, safety appliances, steel rails, viaducts, bridges, signals, time-tables. Express companies. Mail. Commodities transported.

3. *Causes Affecting Transportation:* Influence of physical conditions. Exchange of goods; products; rates, influences of cheap and quick transportation. (King's Advanced Geography.)

Methods.—Local commerce and transportation in the home town or city; in Kansas; center of business; routes of trade; main streets; stores; factories.

References.—Commercial Geography, Redway; Commercial Geography, Adams; American Railroads; The World's Work.

WEATHER.

1. Observations of; Weather Bureau; weather maps; reading weather map. Movements of storms; westerlies; cyclonic storms; studied from weather maps. (Page 17.)

2. CLIMATE.—The weather changes. Definition of weather; of climate; dry climate; rainy climate; continental climate; oceanic climate.

Causes: Latitude; altitude; zones of heat; influence of water; humidity; winds—westerlies, trade winds; calms; ocean currents; mountains. Rainfall (page 21).

3. LATITUDE AND LONGITUDE (page 22).

4. STANDARD TIME.

Methods.—Observations of weather. Study and use of Weather Bureau maps. Practice telling the climate of a given place from an outline map, applying causes affecting climate. Compare results obtained with those given in textbook.

References.—Climate of North America; King's Methods and Aids; physical geographies; Davis's Meteorology.

a. The earth as a whole. The earth and other planets. The solar system.

b. Daily motion. Yearly motion. Inclination of the axis; results; the four seasons; unequal length of day and night; equinoxes; zones. Meridians and parallels on a globe.

c. Explain three causes of the change of seasons. Poles, circles.

Methods.—Darken the schoolroom. Allow sunlight to enter through a small hole. Hold a hand globe in the rays, and by inclining the axis show how the sun lights up certain parts. Draw a diagram to illustrate change of seasons.

References.—Geographies; astronomies; Astronomical Geography, Jackson; Methods of Teaching Geography, Crocker; Mathematical Geography, Johnson.

NATURE'S PREPARATION FOR MAN.

1. Changes in the earth's crust (page 26.) Cooling and folding. Building up of North America.
2. Volcanoes: Mts. Pelee, Krakatoa, Vesuvius, etc. A typical volcano: Causes; effects. Map of volcanoes.
3. Earthquakes: Effects.
4. Weathering, erosion, river, ice; a talus.
5. Flood plains.
6. Glaciers; a crevasse; moraines. Ice sheet; effects; drumlin; eskers. How has nature prepared the earth for life?
7. Man's influence on nature.

Methods.—Draw a typical volcano. Government map of Shasta, Cal. Make a volcano of clay, putty or plasticine. Visit rivers in Kansas and notice effects of erosion, flood plains, overflows. Use Curtis's Geographical Models. (Mass. Sales Co., Boston.)

References.—Physical geographies; Russell's North American Volcanoes; Wright's Ice Age; Well's Realm of Nature; Earthquakes, by Dutton; Story of Our Continent, Shaler; Man and Nature, Marsh.

KANSAS.

1. What people live in Kansas? What races? From what countries are they? Where is the state most thickly settled?
2. Cities.
3. Leading occupations. Great industries.
4. Resources.
5. Important railroads. Commerce. Education. Government.
6. General features. Central position. Area. Boundaries. Surface. Drainage. Irrigation. Climate. Soil. Striking characteristics of the state.

Methods.—Draw a political map. Print on it the productions. Consult government map on sand dunes, Kinsley, Kan. Draw a physical map in colors; a soil map. Study the state by topics. Compare Kansas with Missouri. Imaginary trip across the state.

References.—Different geographies; Bulletin No. 155, "Alfalfa," published by the Agricultural Experiment Station, Manhattan; state documents.

NORTH AMERICA.

1. Position. Parts. Canada and the United States; characteristics. Surface of the United States (page 38); its drainage and climate. World power. Groups of states, territories, dependencies (page 133).
2. CENTRAL STATES: People compared with the Southern people. Leading cities. Each noted for what? In what part is Kansas?
3. Three other leading states in this group. Study each briefly with reference to its leading characteristics. The great industries of the group. Agriculture: the wheat and corn belts. Mining. Manufacturing. Important products. Domestic commerce and transportation. Railroads.
4. Causes producing the above conditions. Position. Surface. Drainage, lakes, canals. Climate. Education.

Methods.—Single-sheet map of United States by U. S. Geological Survey; consult government maps on meandering rivers; maps by Mississippi and Missouri River Commissions, St. Louis, Mo.; use blackboard cloth out-

line map; study by above topics; use Heath's Progressive Outline Maps; on them make a commercial map (page 96); pictures of cities and industries; Underwood & Underwood's stereographs; imaginary trip down the Mississippi river; across the Mississippi valley on a leading railroad route.

References.—Other geographies; physical geographies; Suggestive Lessons, King; Lakes of North America, Russell; National Geographic Magazine; The World's Work; Canada in the Twentieth Century, Bradley; Natural Resources of the United States, Patton; Methods and Aids in Geography, King; The Great American Plateau, Prudden; Practical Physiography, Fairbanks.

5. WESTERN STATES: California (page 105). Gold and silver mining. Deserts (page 114.) Irrigation (page 116). Pacific ocean. Commerce. Surface. Drainage. Climate. Government maps, such as plateaus, Price river, Utah, Lamar, Granada, Colorado.

6. SOUTHERN STATES (page 69): People. Texas and Georgia. Cotton (page 78). Sugar. Rice. Coal and steel. Cotton manufacture. Mexico (page 125). West Indies. Panama (page 131); advantages when finished. Government map of Mt. Mitchell.

7. ATLANTIC STATES (page 31): People. Pennsylvania and New York. Washington. Philadelphia. New York. Manufacturing. Mining. Foreign commerce. Government map of shore lines, as Sandy Hook, Barnegat, etc.

8. NEW ENGLAND STATES (page 30): People. Puritan element. Massachusetts. Boston. Manufacturing. Fishing. Education. Government map of drowned valleys, Boothbay, Maine.

SOUTH AMERICA (page 139).

1. Striking features (Grammar Geography, page 139). Sections (political map). The three great republics—Brazil, Argentina, Chile. Their cities. Peoples in each.
2. Coffee and rubber in Brazil. Selvas. Tropical vegetation. Amazon system.
3. Cattle on the pampas and llanos. Wool and sheep in Argentina. Progressive country.
4. Nitrate and copper in Chile. Recent growth of this country.
5. Smaller republics. Interesting places.
6. General features and causes. Andes and Brazilian systems of elevation. Plains, rivers. (See relief map.)
7. Climate; vegetable and animal life; races; mining; products; commerce; government; religion; growth.

Methods.—Compare Brazil with the United States. Compare the Amazon with the Mississippi; the Andes with the Rockies. Use wall map and globe. Use cloth outline blackboard map in developing coast, surface, and drainage. Use Underwood & Underwood's stereographs of South America and other countries. Pictures and slides. Specimens of coffee berry, raw rubber, cinchona, cacao bean. Draw commercial map of South America. Represent production of coffee thus:

Coffee: World ————————
Brazil ————————

Wool: World ————————
Argentina ————————
United States ——

References.—Other geographies; Our American Neighbors, Coe; The Great Mountains and Forests of South America, Fountain; Round and About South America, Vincent; South America, Herbertson; South America, Carpenter; The Bolivian Andes, Conway; Through the Republics, Marten; Geographical Reader, Rupert.

EUROPE (page 155).

1. British Empire. Parts. Peoples. Cities. Industries. World commerce. Navy Products.
2. General features and causes. Central position. Size. Surface. Drainage. Climate. Education. Culture. Government. Colonies.
3. Other great countries in a similar way. France. The French peasants. Paris. Vine growing, etc. German Empire. Industries. Berlin, etc. Austria-Hungary, Italy, and Russia. Other smaller powers.
4. Eurasia. General features of Europe—surface, elevations, plains, drainage. Climate. Industries. Commerce. Products. Governments. Religions. Art. General intelligence.

Methods.—Apply theoretically the causes affecting climate to the western side of Europe. Write down results and compare with the statements in the geography.

Review a country like Germany by comparison with other countries. Draw a commercial map of Europe.

Use in the study a list of topics like those given in Grammar School Geography, page IV. Use constantly the commercial map of the world (pages 242, 243). Curtis's Geography Models.

References.—Suggestive Lessons, King; Methods and Aids in Geography, King; Picturesque Geographical Reader No. 6, King; Among English Hedgerows, Johnson; How London Lives, Gordon; Along French Byways, Johnson; France of To-day, Wendell; German Life in Town and Country, Dawson; Russia Described by Famous Writers, Singleton; Our European Neighbors (several volumes); Modern Europe, Coe. See Grammar Geography, page 246.

ASIA (page 193).

1. Eurasia (relief map, page 216). Chief characteristics. Most important countries.
2. India: The people, their habits and customs. Calcutta and other cities. Industries. Commerce. General features—shape and coast. Surface. Drainage. Soil. Climate. Religions. Government. Education.
3. China, following a similar set of topics.
4. Japan.
5. Siberia.
6. Other countries of Asia.
7. Summary and general features of Asia—shape, coast, surface. "Roof of the world," "The abode of snow." Drainage, climate, life.

Methods.—Compare China with Japan; the Alps with the Himalayas; Europe and Asia; the size of India and France. Draw a commercial map of Asia, a profile from north to south; a rainfall map. Write out the geography of Japan or some other country. Write a letter home from an Asiatic city, as Benares.

References.—Little People of Asia, Miller; Asia, Carpenter; Readers, Youth's Companion series; Chinese Characteristics, Smith; A Bird's-eye View of India, Stevens; Japan as We Saw It, Gardner; Through Asia, Sven Hedin. (See list in geography.)

AFRICA (page 219).

1. Characteristics of the grand division. Four parts.
2. Arabs, Negroes, Whites. Subdivisions.
3. Alexandria, Cairo, Cape Town.
4. Northern section. Egypt. People. Ruins. Suez canal. Desert.
5. Interior. Rubber and ivory.
6. South Africa, Dutch, etc. Gold, diamonds, wool. Important places in each section. Mining. Products. Commerce of each section.
7. General features—shape, coast line, elevations, plateaus, drainage.

Great rivers and their peculiarities; the Nile—its peculiarities. Irrigation. Climate. Mohammedan religion.

8. Animal life. Sport. Present condition. Colonies.

9. Page 233.) Australia and the Pacific groups of islands, topically studied. Atolls. Volcanoes. Coral reefs. Gold, wool, copra.

Methods.—Study Egypt and South Africa topically. Compare the Nile with the Mississippi.

Review by having each pupil put on the map as many facts as possible. Write letters from interesting places to the folks at home. Make production maps.

Let each one make out ten good questions for review.

Illustrate facts thus:

Gold Production: World ————————
South Africa ——
United States ————

References.—Africa, Herbertson; A Thousand Miles up the Nile, Edwards; Present Day Egypt, Penfield; The Building of the Nile, Peel; Actual Africa, Vincent; Impressions of South Africa, Bryce; Australia, Old and New, Grey; Australia, Carpenter; The Heart of Australia, Gregory.

INDUSTRIES (pages 240-245 and index).

1. United States: Leading products; agricultural sections in the West, South, East; manufacturing centers; where situated. Mining—West or East? What products? Fishing—kinds of fish caught. Lumbering—where carried on.

2. Industries of the world. Tropical products. Temperate products.

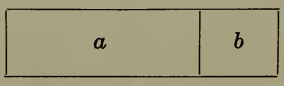
3. Commerce—domestic. Commercial routes in United States. Railroads, Canals. Commercial centers in North America.

4. Foreign commerce. (Commercial map.) Navigation. Great commercial routes. Chief of articles of foreign commerce.

5. Centers of commercial activity in the United States. Greatest seaports in the world.

Methods.—Use Heath's outline map of the world. Trace great commercial routes. Name noted seaports. Print leading exports of each country. Draw diagrams as in Redway's Commercial Geography:

Corn:



a United States. *b* Rest of the world.

Use wall map of the world—Mercator's projection. Print on it facts learned (pages 242 and 243). Make a list of ten leading exports; ten leading imports.

References.—Commercial geographies.—Redway, Adams, Chisholm, Trotler. Expansion, Strong; Our Country, Strong; Industries of To-day, Rocheleau; Coal and Coal Mines, Greene; Anthracite Coal Industries, Roberts; The American Railway; Workers of the Nation (2 vols.); World's Work; The Soil, King; Practical Agriculture, James; By Land and Sea (Companion series); Man and His Markets, Lyde.

GRAMMAR AND COMPOSITION.

ANALYSIS. *Eighteen days.*

The sentence and its essential elements.—The declarative sentence: Its nature; its essential elements, subject, copula, predicate attribute. The interrogative sentence. The imperative sentence.

Important elements of some sentences: Object, predicate, attribute of the object.

The adjunct.—Classification according to use; classification according to form.

Compound elements and the coördinate conjunction.

Special study of word adjuncts.—The adjective; the adverb, the noun and pronoun used as adjuncts.

The prepositional phrase.

The adjective clause.—Kinds, limiting and purely descriptive; connectives, the conjunctive pronoun and the conjunctive adverb.

The adverbial clause.—Kinds; connectives, the conjunctive adverb and the subordinate conjunction.

The noun clause.

The independent elements.

Analyze sentence from the text.

Discuss the value of analysis. Should we do less diagramming and more oral analyzing? Why? Give the advantages of each.

PARTS OF SPEECH. *Four weeks.*

General Directions.—The teacher is to develop in a model manner in each lesson some of the terms and definitions used.

The definitions and terms used in these lessons should be illustrated by the student.

The exercises for drill in parsing and construction* are to be taken from Gowdy's English Grammar.

In each part of speech, drill should begin with parsing and end with construction alone. Drill in construction should be given fully as much attention as drill in parsing.

Parsing should not be continued beyond the point where pupils have a proper idea of the application of the terms used and reasonable skill in their use. It can easily be carried beyond its usefulness.

GRAMMAR.

Definition; divisions. Define: Etymology; syntax. Parts of speech: True basis of classification of words into parts of speech.

Inflection: Definition; difference between *inflection* and *derivation.* Aside from inflection, what does the study of etymology include? Relative amount of time for the systematic study of inflection, and of the remaining portion of etymology.

Discuss: "The child can never become proficient in form without many distinct acts of attention *dealing with form alone.*"

State the parts of speech of each word in the following: "Birds of passage sailed through the leaden air from the ice-bound, desolate northern bays to the shores of tropical islands."

Make clear the distinction between language and technical grammar. What is the educational value of technical grammar? Where in our schools should technical grammar be taught?

* By "construction" is meant the classification of a word as to function and government in the sentence.

NOUN.

Classes; modifications. Discuss: Person, number, gender, case. Declension of nouns. Abstract and collective nouns. Rules for forming plurals. Develop an outline for parsing the noun. Give practice in parsing nouns and giving their construction. Discuss: (1) The value of parsing and giving constructions. (2) How to secure good results from them.

Give rules, with illustrations, for the capitalization of nouns in sections 149-151, Gowdy.

PRONOUN.

Define; classify; define each class; define antecedent. Illustrate: Conjunctive or relative, interrogative, personal, and adjective pronouns. Rapid drill in declension of pronouns. Give practice in parsing and construction. Illustrate the construction of nouns and pronouns. Rational methods for securing correct usage of pronouns. What determines correct usage in our language?

Give practice in the number froms in section 185, Gowdy.

Give practice in the gender forms in section 186, Gowdy.

Give practice in the case forms in section 187, Gowdy.

ADJECTIVE.

Define; justify your definition by the derivation of the word. Classes. Give examples of the classes in sentences.

Comparison: Name and define the degrees: define—regular, irregular, periphrastic comparison. Illustrate the several kinds of comparison.

Relations of adjectives: Attribute, predicative, factitive. Illustrate these relations.

Develop a model for parsing adjectives.

Give practice in giving the classification, comparison and use of adjectives.

VERB.

Definition. Classification (1) as to form; (2) as to nature. Define: Defective, redundant, impersonal verbs. Principal and auxiliary verbs. Discuss the auxiliaries of voice, mode, tense and style. Principal parts: What forms of the verb constitute them? Why called "principal parts"? Conjugation: Definition; name various forms. Define synopsis.

The class should have a complete and thorough drill on the conjugation and synopsis of some verb. Distinguish subjunctive from indicative forms.

The importance of the mastery of the principal parts of the verb.

How does the use of the auxiliary verb give added power and accuracy to the English language?

Give the principal parts of verbs commonly used incorrectly.

Voice: Define; active, passive. Tests that may be applied in determining whether a verb is passive.

Mode: Define; distinguish between finite and infinite modes. Define: Indicative, subjunctive, imperative. Upon what grounds can the introduction of the "potential" mode be justified?

Discuss: "Mode in the verb is the result of mood in the mind."

Tense: Define; time expressed by each tense; forms in each mode.

Person and number used in each mode and tense? Give practice in the number and person forms in section 279, Gowdy. Give practice in parsing verbs.

Show how the correct teaching of technical grammar induces clear thought and expression.

Discuss and illustrate the proper use of "shall" and "will."

Verbals.—Double nature; classes. Infinitive: Define; forms; tenses; constructions. The gerund. Constructions. Participle: Define; classes. Give practice in construction.

ADVERB.

Definition; classes—as to function; simple; interrogative; conjunctive; relative; modal. Classify adverbs as to meaning, time, place, cause, reason, manner, doubt, specification, affirmation, negation, and number. Adverbial phrases; phrase adverbs. Comparison. Give practice in parsing adverbs.

Study the rules and exercises in section 284, Gowdy.

PREPOSITION.

Define: Classes; functions of the prepositional phrase. The correct use of prepositions, section 295, Gowdy.

CONJUNCTION.

Define; classes; subclasses; examples of each.

COMPOSITION. *Seven days.*

The teacher will refer to the course in language and grammar in the State Course of Study for Graded Schools for suggestions as to the plan to be followed in composition.

The students should be trained with a view to their continuing the teaching of composition and language work during the years in which formal grammar is taught.

All oral and written errors of speech in this subject and in other subjects should be corrected. Outline a method for carrying out this plan. The manner of making the corrections of manuscripts should be adapted to use in the grades.

Give illustrative work in writing compositions sufficient to make the plan of teaching clear to the students.

Give full directions as to the use to be made of manuscripts after the compositions have been written. Show how corrections may be made and how criticism may be made valuable to the entire class.

Attention should be given to the use of capitals, abbreviations, word forms, punctuation, paragraphing, and the form and arrangement of sentences.

ORAL WORK.

Facility in oral expression should be the aim. Pupils should be furnished interesting knowledge to express, and taught to express this knowledge with originality and freedom.

The importance and the dignity of oral work in language is often underestimated. We need to talk well as much as to write well; and, as a test of culture, the English that we speak counts for more than that which we write.

Only by oral practice can we master the principles of agreement and concord, and catch the true spirit of English idiom.

GENERAL SUGGESTIONS.

The attention of the teacher is called to pages 57-60 of the State Course of Study for Graded Schools for suggestions.

A complete course would comprise a study of the best models of written language suitable for the several grades, together with exercises to develop the language faculty, so that the learner, while encouraged to vigorous thinking, may express and communicate his thought willingly and readily in simple, correct, well-chosen language, whether oral or written.

Though language in itself is an object of study, it must be remembered that the acquisition of language as a medium of expression constitutes a part of the teaching of every other subject. As the material for thought may be furnished by such studies as form, color, number, the natural sciences, geography, history, etc., the time assigned to these latter subjects will be used partly in getting material and developing thought, and partly in expressing and communicating thought in language. All stud-

ies, therefore, furnish useful knowledge, and are the natural means for developing those powers upon which the language faculty depends. They are the necessary basis of language training.

Do not ask the student to talk or write connectedly upon a subject until by observation, conversation, questioning, reading, etc., there is formed a clear and orderly arrangement of ideas in his mind.

The purpose of all language teaching is: (*a*) To develop and train the language faculty by observation and practice, so that the pupil may speak and write correctly, naturally and effectively; and (*b*) to develop and confirm in him a literary conscience; that is, a keen sense for the genius and idiom of his mother tongue.

Among these, as secondary or minor points to be considered, are:

In Speech.	*In Written Language.*
Purity of tone.	Good penmanship.
Distinctness of utterance.	Forms of letters.
Correct pronunciation.	Correct spelling.
Suitable inflection.	Punctuation.
Right choice of words.	Right choice of words.
Freedom from solecisms and inelegancies.	Freedom from solecisms and inelegancies.
Orderly arrangement.	Orderly arrangement.

Keep correct forms before the eye and drill on the forms that should replace the common improprieties of speech. Call attention to good models of language. Let the children commit to memory choice passages of prose and poetry.

Illustrative work in writing compositions should be given, to make the plan of teaching the subject very clear.

Every exercise in school in which words are used should be made to aid in language training. In the grades exercises in *oral* language should always precede those in *written* language. Reading, form, elementary science, geography, history, and arithmetic will furnish constant opportunities for practice in most forms of language work.

The five series of exercises embodying each year all the fundamental disciplines in expression are: Observation; pictures; stories and poems, classics, biography, history, etc.; letter writing; dictation.

OUTLINE OF THE WORK IN COMPOSITION.

1. *Observation:*
   Suggested material:
   - Flowers, trees, fruits, seeds.
   - The various field crops, such as corn, wheat, alfalfa, etc.
   - Animals, including birds, insects, domestic animals and common wild animals.
   - Minerals, including the more common rocks.
   - Manufacturing and other industries that can be observed in the community.

   Develop a language lesson based on observation. The lesson should include a brief composition. Give full directions as to the use to be made of manuscripts after compositions have been written. Show how corrections may be made and how criticism may become valuable to the entire class.
2. *Pictures:*
   Develop a language lesson based on a picture and prepare a brief composition as a result of the study of the picture. The picture studied may be on the wall of the schoolroom or it may be a picture well selected from the Perry pictures. The use made of the composition in class should follow the suggestions made in lesson 1.

3. *Stories, etc.:*

Develop a language lesson based on a story, poem, or selection from a school reader. A brief composition should be written as part of the language lesson.

The use to be made of the composition in class should follow the suggestions made above.

Discuss the use of the following material as a basis for language training: Stories, poems, selections from the readers, classics, and such subjects as biography, history and geography.

Discuss the use to be made of the following types of language exercises and give directions as to the method of giving them:

a. Narrative and descriptive writing.
b. Reproduction of stories read or heard.
c. Relating personal experience.
d. Paraphrasing. (Illustrate the paraphrasing of a stanza.)
e. Memorizing selections.

4. *Letters:*

Have each member of the class write a letter. Study the forms of social and business letters.

Drill on the details of punctuation and arrangement of the parts of letters. Discuss the choice of stationery, manner of folding letters, and other things that contribute to good taste in letter writing. Require practice by the class in teaching the above topics.

5. *Dictation:*

This exercise is not to be given very frequently. The aim is to impress the details of form and arrangement.

Show how each of the above exercises may be made *well graded* and *progressive* from the First to the Eighth Grade inclusive.

Outline and illustrate a plan for developing language lessons for the various grades. It is suggested that the class be divided into sections, each section to report on a separate grade. Another good way is for the instructor to present the plans himself, and to allow a free discussion of them by the class. Emphasize the necessity for continuing constructive language training in addition to the study of grammar in the higher grades. Show how it is possible to follow the graded plan of language teaching in its important features in the rural schools. (See White's Art of Teaching, pp. 239-241.)

READING.

This outline on reading was prepared by A. A. Reed and is based upon Sherman and Reed's Essentials of Teaching Reading, 1909 edition.

INTRODUCTION.

The following forty-four lessons in reading have been planned to meet the requirements of the course in normal training and are based on the experience of classroom work. Each lesson is to have approximately three minutes given to technical drill on articulation or on the use of diacritical marks, five minutes to memory recitations, twelve minutes to the discussion of the text, and twenty minutes to oral reading.

The selections for memorizing are given in such numbers that members of the class may have different assignments. Some of the shorter ones should be memorized by all, especially those by Robert Louis Stevenson. Each member of the class should memorize one short and one long poem a week. C. G. V. stands for Child's Garden of Verses, P. for Penniman. References by figures only are to the volumes of Graded Poetry.

It is not intended that all questions for review should be discussed. These contain the essence of the chapter. They serve as guides to the pupil in studying the lesson. Generally it will suffice to discuss the ones that need more light. It is a good plan to have the pupils prepare to write the outline of the chapter. It is a helpful feature in preparing the lesson. Occasionally a few minutes may be taken for the reproduction of this outline from memory before beginning the discussion.

The outline of American authors is given to assist the pupils in securing a correct localization of the writers in point of time, as well as a view of their relative rank. The class should memorize the outline for the general information contained. It will not be necessary to spend time discussing it, except as it comes in naturally with the poems memorized.

AMERICAN AUTHORS.

A. Colonial period. (1607-1765.)
   John Eliot, Cotton Mather, JONATHAN EDWARDS.

B. Revolutionary period. (1765-1789.)
   a. Prose: BENJAMIN FRANKLIN, THOMAS JEFFERSON, James Madison, Alexander Hamilton, John Adams.
   b. Poets: John Trumbull, Francis Hopkinson.
   c. Orators: Patrick Henry, Josiah Quincy.

C. Period of the republic. (1789 to present time.)
   1. National beginnings. (1789-1815.)
      a. Poets: Francis Scott Key, Joseph Hopkinson.
      b. Biographers: John Marshall, William Wirt.
      c. Essayists: Thomas Paine, Noah Webster.
      d. Orators: Fisher Ames, John Randolph.
   2. Golden age. (1815-1870.)
      a. Poets: WILLIAM CULLEN BRYANT, Joseph Rodman Drake, Fitz-Greene Halleck, EDGAR ALLEN POE, JOHN GREENLEAF WHITTIER, HENRY WADSWORTH LONGFELLOW, Alice and Phœbe Cary.
      b. Historians: William H. Prescott, George Bancroft, John Lothrop Motley.
      c. Essayists: WASHINGTON IRVING, RALPH WALDO EMERSON, JAMES RUSSELL LOWELL, OLIVER WENDELL HOLMES.
      d. Humorists: Charles F. Browne ("Artemus Ward"), David R. Locke.
      e. Orators: DANIEL WEBSTER, Edward Everett, Henry Ward Beecher, Wendell Phillips.

C. Period of the republic.—*continued.*
2. Goldenage. (1815-1870.)
f. Novelists: JAMES FENIMORE COOPER, NATHANIEL HAWTHORNE, Harriet Beecher Stowe.
3. Present age. (1870 to present time.)
a. Poets: Thomas Bailey Aldrich, Sidney Lanier, Celia Thaxter, Walt Whitman, EUGENE FIELD, James Whitcomb Riley.
b. Historians: John Bach McMaster, John Fiske, Theodore Roosevelt, Edward Eggleston.
c. Essayists: John Burroughs, Edward Everett Hale, George William Curtis, Charles Dudley Warner, Hamilton Wright Mabie.
d. Humorists: Samuel L. Clemens ("Mark Twain"), Robert J. Burdette.
e. Orators: James G. Blaine, William Jennings Bryan.
f. Biographers: John Hay, Ulysses S. Grant, Julian Hawthorne.
g. Novelists: William D. Howells, Henry James, Frank R. Stockton, Mary E. Wilkins, Lewis Wallace, Helen Hunt Jackson, Francis Bret Harte, George W. Cable, Thomas Nelson Page, James Lane Allen.

MATERIALS.

ESSENTIALS OF TEACHING READING, Sherman and Reed. University Publishing Company, Lincoln, Neb.
ACADEMIC DICTIONARIES, one for each member.
SET GRADED POETRY READERS, First to Eighth Year. Charles E. Merrill Company, New York.
THE SCHOOL POETRY BOOK, Penniman. D. C. Heath & Co., Chicago.
A CHILD'S GARDEN OF VERSES, Stevenson. Rand, McNally & Co., Chicago.
ELEMENTS OF LITERATURE AND COMPOSITION, Sherman. University Publishing Company, Lincoln, Neb.
READING: HOW TO TEACH IT, S. L. Arnold. Silver, Burdett & Co., Chicago.
HOW TO TELL STORIES TO CHILDREN, S. C. Bryant. Houghton, Mifflin & Co., Chicago.
TEACHING OF ENGLISH IN THE ELEMENTARY AND SECONDARY SCHOOL, P. Chubb. Macmillan Company, Chicago.
HOW TO TEACH READING IN PUBLIC SCHOOLS, S. H. Clark. Scott, Foresman & Co., Chicago.

LESSON I.—*Time.*

Read chapter 13, and chapter 14 to "Labials," page 151.
Study chapter 1, to middle of page 9.
Discussion of first ten questions, page 12.
First six stanzas of Gray's "Elegy," page 207, for practice.
Reference: Clark, chapter 1.
Exercises 1 and 2, page 151.
For memory: "He Who Would Thrive," Franklin. 1-12.
"Hurt No Living Thing," Christiana G. Rossetti. 3-50.
"September," Helen Hunt Jackson. 4-62.

LESSON II.—*Time.*

Complete chapter 1, with a discussion of the remaining questions and suggestions.
Rules 1 and 2, page 141.
Study page 208 for practice in time. Insist on the use of the dictionary and the encyclopedia for all words of uncertain pronunciation or meaning.

For memory: "Seven Times One," Jean Ingelow. 1-48.
"Suppose," Phœbe Cary. 3-50.
"The Old Oaken Bucket," Woodworth. 4-71.

LESSON III.—*Time.*

Study of "Paul Revere's Ride," pages 219-223, for practice in varying time.

All memorize "Windy Nights" for practice in rapid time.

Exercises 3 and 4, Articulation.

For memory: Robert Louis Stevenson.
"Windy Nights," C. G. V. 22.
"The Wind," C. G. V. 52. 1-16.
"At Morning." 8-92.
"Where Go the Boats," C. G. V. 46.

LESSON IV.—*Grouping.*

Study chapter 2, entire. Discussion of review questions. In connection with the last, note that the first example contains a restrictive clause, with the emphasis on the word "hurt." Purists insist that the relative "that" should be used. This would be convenient. Unfortunately, writers do not follow the dictum, so it is valueless.

Drill in pronunciation and definition. Smithy, sinewy, forge, bellows, chaff, village, paradise, catch, sorrowing. Apply rules 1, 2, 4, 5 and 6, on pages 141, 142.

"The Village Blacksmith" for practice. Be sure that the reader and listeners form a definite picture of the "spreading chestnut tree" overshadowing the low "smithy." A group division after "smithy" would be justified. Next they must add the "smith," so placed that the details that follow can be easily recognized. Be sure that the emphasis is on "mighty."

In the third stanza there should be four groups in the first line. The smith must be at work at his anvil. The noise of the bellows and the sound of the hammer must arise in imagination, followed by the slow, measured tones of the church bell, to which the latter is likened, then by a glimpse of the sunset.

In the fourth stanza, "look in" should form one group, as should also "that fly." The grouping as suggested in the text would make the sparks fly from the thrashing-floor.

In the fifth stanza, there should be a group division after "pray." The smith is seen "among" a large family of boys. The service must be heard.

For memory: "Good Morning," Browning. 1-40.
"The Owl," Tennyson. 3-69.
"Nikolina," Celia Thaxter. 4-88.

LESSON V.—*Grouping.*

Study of "Barbara Frietchie," pages 217-219, for grouping. Have some of the stanzas marked.

Have a simple prose selection from a primary reader marked for grouping.

Reference: Sherman, chapter 25. Clark, chapter 1, chapter 4.

Exercises 5 and 6, Articulation.

For memory: "Boats Sail on the Rivers," Rossetti. 1-18.
"I Remember, I Remember," Hood. 3-70. P. 41.
"Ariel's Song," Shakespeare. 4-7.

LESSON VI.—*Emphasis.*

Study chapter 3 to the bottom of page 23.

Use the first reader to illustrate emphasis. Have the pupils mark and then read lessons, assigning a different one to each. Better results can be secured by using first these simple exercises that have no mechanical difficulties. Choose selections that have consistent paragraph relations.

References: Clark, chapter 2, chapter 8, chapter 9.
Rules 3 and 4, page 141.
For memory: Robert Louis Stevenson.
"Autumn Fires," 1-19.
"The Land of Nod," C. G. V. 60.
"From a Railway Carriage," 4-7.

LESSON VII.—*Emphasis.*

Assign individual lessons from advanced first reader or from second reader.
Exercises 7 and 8, Articulation.
For memory: Robert Louis Stevenson.
"Rain," 1-17.
"Bed in Summer," C. G. V. 13. 1-67.
"Young Night Thoughts," C. G. V. 15.

LESSON VIII.—*Expression.*

Study chapter 12.
Discuss review questions, page 136.
Rules 5 and 6, page 142.
For memory: Christina G. Rossetti.
"Who Has Seen the Wind?" 1-15.
"The Swallow," 3-32.
"There's Nothing Like the Rose," 4-8.

LESSON IX.—*Emphasis.*

Continue chapter 3 to "Illustrative Lessons," page 26, and discuss review questions, page 32.
Drill exercises from second reader.
Exercises 9 and 10, Articulation.
For memory: "A Dewdrop," Frank Dempster Sherman. 1-18.
"The Piper," Blake. 3-10.
"Jack in the Pulpit," Clara Smith. 4-11.
"The Brook," Tennyson. Page 7.

LESSON X.—*Emphasis.*

Drill exercises from second or third reader.
Study "Illustrative Lessons," pages 26-31. If these exercises are read, they should be taken from primary readers, not from the text. "The Nut in the Forest" is another example of the first type. "The Three Goats" is an example of the second type.
Marking and pronunciation of words on page 143, illustrating rules 1 to 6.
For memory: "Sleep, Baby Sleep," 1-21.
"The Voice of Spring," Mary Howitt. 3-16.
"Hohenlinden," Thomas Campbell. P. 30.

LESSON XI.—*Inflection.*

Study chapter 4. Discussion. For practice, exercise on pages 37, 38.
Reference: Clark, chapter 2.
Exercises 11 and 12, Articulation.
For memory: Felicia Dorothea Hemans.
"Casabianca," 4-16.
"Night-scented Flowers," 3-63.
"The Landing of the Pilgrims," 5-33.

LESSON XII.—*Force.*

Study chapter 5.
Lincoln's "Gettysburg Address," pages 211-212.
Drill on diacritical marks. All sounds of "a," with type words.
For memory: Alfred, Lord Tennyson.
"Little Birdie," 1-39.
"The Throstle," 3-22.
"Sweet and Low," 4-82.

LESSON XIII.—*Force.*

Study "Liberty and Union," pages 214-215.
Exercises 13, 14 and 15, Articulation.
For memory: "The Baby," Macdonald. 1-37.
"The Violet," Jane Taylor. 3-23.
"A Boy's Song," James Hogg. 3-7. 4-14.

LESSON XIV.—*Quality.*

Study chapter 6, with exercises for practice.
Reference: Sherman, chapter 22. Clark, chapter 3.
Diacritical marks. All sounds of "e," with type words.
For memory: William Allingham.
"Robin Redbreast," 1-43.
"Wishing," 3-9.
"The Fairies," 1-70.

LESSON XV.—*Examination—Mechanics of Reading.*

LESSON XVI.—*Types and Figures.*

Chapter 7, to Metonymy.
Reference: Sherman, 11-13.
The memory exercises offer good material in figures.
Diacritical marks. All sounds of "i" and "y," with type words.
For memory: "The Land of Counterpane," Stevenson, C. G. V. 33. P. 2.
"My Bed is a Boat," Stevenson. 1-45. C. G. V. 58.
"Daisies," Frank Dempster Sherman. 1-66.

LESSON XVII.—*Types and Figures.*

Complete the text of chapter 7. Analyze exercises on pages 64-65. The first quotation might have been written.

"Silently one by one, like flowers in infinite meadows,
Appeared the lovely stars, like forget-me-nots of the angels."

Or again,

"Silently one by one, in infinite meadows appearing,
Blossomed the lovely flowers, the forget-me-nots of the angels."

Either would have preserved the form and satisfied the demands of meter, giving approximately the same meaning. Let the class decide the exact difference, and the advantage in the form the poet chose.

Exercises 16, 17 and 18, Articulation.
For memory: Frank Dempster Sherman.
"Wizard Frost," 1-83.
"The Four Winds," 3-26.
"May," 6-94.

LESSON XVIII.—*Types and Figures.*

Study, "The Chambered Nautilus."
Diacritical marks. All sounds of "o," with type words.
For memory: "Little White Lily," Macdonald. 1-60.
"The Violet," Lucy Larcom. 3-27.
"Jack Frost," Hannah Gould. 3-88. 4-18.

LESSON XIX.—*Types and Figures.*

Study the figures of Gray's "Elegy," pages 207-210.
Exercises 19 and 20, Articulation.
For memory: Henry W. Longfellow.
"Rain in Summer," 4-9.
"The Children's Hour," 4-20.
"Excelsior," 5-89.
"Hymn to the Night," 7-81.
"A Psalm of Life," 5-82.
"The Day is Done," 5-37.

LESSON XX.—*Drill Lesson.*

"The Southern Soldier," pages 213-214.
Diacritical marks. All sounds of "u" and the diphthongs, with type words.
For memory: Henry W. Longfellow.
"Ship of State," 8-67.
"The Arsenal at Springfield," 8-65.
"Daybreak," 7-78.
"The Builders," 6-83.

LESSON XXI.—*Effects.*

Study of chapter 8, through page 73.
Assign the exercises suggested on page 73.
Reference: Sherman, chapters 14-17.
Exercises 21 and 22, Articulation.
For memory: Robert Browning.
"Incident of the French Camp," 8-43.
"Apparitions," 8-45.
"How They Brought the Good News," text, pages 239-240. P. 79.

LESSON XXII.—*Effects.*

Exercises, page 78.
Diacritical marks. The consonants.
For memory: "I Love You, Mother," Joy Allison. 1-86, 3-92.
"Marjorie's Almanac," Aldrich. 3-94.
"Consider," Rossetti. 3-86.

LESSON XXIII.—*Effects.*

Study the "effects" in the first five stanzas of "How They Brought the Good News from Ghent to Aix," pages 239-240.
Exercises 23 and 24, Articulation.
For memory: Charles Kingsley.
"The Three Fishers," 6-19. P. 72.
"The Lost Doll," 1-42.
"A Farewell," 4-80.
"The Sands of Dee," 5-60.

LESSON XXIV.—*Effects.*

Complete "How They Brought the Good News from Ghent to Aix."
Mark and pronounce list of words commonly mispronounced.
For memory: James Russell Lowell.
"The First Snowfall," 6-16.
"The Present Crisis," 8-77.
"The Finding of the Lyre," 7-83.

LESSON XXV.—*Effects.*

Study "The Death of Little Nell," pages 236-237.
Exercises 25 and 26, Articulation.
For memory: "The Little Plant," Kate L. Brown. 1-58.
"The Tempest," James T. Field. 3-74.
"A Song," James Whitcomb Riley. 4-30.
"Before the Rain," Aldrich. 6-92.

LESSON XXVI.—*Effects.*

Complete "The Death of Little Nell."
Exercise in diacritical marks.
For memory: "If I were a Sunbeam," Lucy Larcom. 1-78.
"November," Alice Cary. 3-65.
"The Wind in a Frolic," William Howitt. 4-48.

LESSON XXVII.—*Effects.*

Make an examination of second, third and fourth readers for material containing effects. Have illustrations read in class.
Exercises 27 and 28, Articulation.
For memory: "How the Leaves Came Down," Susan Coolidge. 1-81.
"Thanksgiving Day," Lydia M. Child. 3-32.
"A Fairy Tale," Helen Gray Cone. 4-51.

LESSON XXVIII.

Study and read "Abraham Lincoln," pages 212-213.
Exercise in diacritical marks.
For memory: "Lady Moon," Lord Houghton. 1-92.
"Good Night and Good Morning," Lord Houghton. 1-89.
"Answer to a Child's Question," Coleridge. 3-90.
From "Rime of the Ancient Mariner," Coleridge. 4-43.

LESSON XXIX.

Study and read "Liberty and Union," pages 214-215.
Exercises 29 and 30, Articulation.
For memory: "Good Night," Victor Hugo. 1-22.
"O, Little Town of Bethlehem," Brooks. 3-73.
"Night," Blake. 4-42.

LESSON XXX.—*Examination.*

LESSON XXXI.—*Primary Reading.*

Study chapter 9, through page 85.
Discussion of first nine questions, page 102.
Exercises 31 and 32, Articulation.
For memory: William Shakespeare.
"Ariel's Song," 1-69.
"Over Hill, Over Dale," 3-21.
"Hark!" 4-44.

LESSON XXXII.—*An Eclectic Method.*

Chapter 9 to the word list, page 88.
Discussion of questions 10 to 24.
For memory: William Shakespeare.
"A Violet Bank," 5-7.
"Orpheus With His Lute," 6-40.
"Good Name," 7-7.
"Polonius's Advice," 8-8.

LESSON XXXIII.—*An Eclectic Method.*

Chapter 9 to phonics, page 91.
Discussion to question 31.
Exercises 33 and 34, Articulation.
For memory: William Shakespeare.
"A Sea Dirge," 5-17.
"The Downfall of Wolsey," 7-10.
"The Quality of Mercy," 8-10.
"Silvia," 8-10.
"Adversity," 8-11.
"Moonlight," 8-12.

LESSON XXXIV.—*An Eclectic Method.*

Chapter 9 to "Course in Primary Reading," page 94.
Discussion to question 42.
For memory: "The Cow," R. L. Stevenson. 1-62.
"Thank You, Pretty Cow," Jane Taylor. 1-59.
"Milking Time," Rossetti. 1-63.
"A Song," Riley. 3-29.
"The Brook Song," Riley. 4-22.
"A Sudden Shower," Riley. 4-59.

LESSON XXXV.—*Course in Primary Reading.*

Discussion of "Course in Primary Reading," chapter 9.
Study chapter 15.
Exercises 35 and 36, Articulation.
For memory: Sir Walter Scott.
"Hie Away," 1-73.
"Lullaby," 3-87.
"My Native Land," 6-75. P. 26.
"Soldier, Rest!" 7-28. P. 34.
"Coronach," 8-27.
"Lochinvar." P. 14, text, pages 216-217.

LESSON XXXVI.—*Methods in Intermediate Reading.*

Study chapter 16 to top of page 178.
Study with the class one or two sets of second readers.
For memory: John Greenleaf Whittier.
"Indian Summer," 3-64.
"The Barefoot Boy," 4-73.
"The Huskers," 5-27.
"The Frost Spirit," 3-67.

LESSON XXXVII.—*Methods in Intermediate Reading.*

Complete chapter 16.
Study the third reader.
Exercise 37, Articulation.
For memory: William Cullen Bryant.
"Robert of Lincoln," 4-27.
"The Yellow Violet," 4-52. P. 62.
"The Gladness of Nature," 5-9.
"Song of Marion's Men," 6-33. P. 17.

LESSON XXXVIII.—*Dramatization.*

This work can be given in any grade, using material adapted to the age of the pupils. In mixed schools it should be limited to rare occasions, as it naturally attracts the attention of all in the room, and requires too much time for the limited schedule.

Finish chapter 9. Dramatize several selections of different types.
For memory: The selections for dramatization.

LESSON XXXIX.—*Silent Reading and Expression.*

Study chapter 17 to middle of page 190.
Study "Lochinvar," pages 216-217.
Exercise 38, pages 160-161.
For memory: William Cullen Bryant.
"March," 6-47.
"To the Evening Wind," 6-57.
"To a Waterfowl," 7-72. P. 77.

LESSON XL.—*Silent Reading and Expression.*

Complete chapter 17. Discussion of review questions.
For memory: Ralph Waldo Emerson.
From "Woodnotes," 7-76.
"Duty," 8-62.
"Concord Hymn," 8-62.
"Each and All," 8-63.

LESSON XLI.—*The Division of the Recitation and Assignment of the Lesson.*

Study chapter 10.
Study "The Lady of Shalott," Parts I and II, pages 228-230.
For memory: Alfred, Lord Tennyson.
"The Shell," 5-62.
"Break, Break, Break," 6-56.
"The Bugle Call," 7-50.

LESSON XLII.

Complete "The Lady of Shalott."
For memory: Oliver Wendell Holmes.
"Old Ironsides," 6-76. P. 26.
"The Last Leaf," 8-74.
"The Chambered Nautilus," 8-73.

LESSON XLIII.—*Classification of Material.*

Chapter 11, to "The fourth class," page 119.
Discussion of first sixteen questions, page 127.
For memory: "Norse Lullaby," Eugene Field. 4-81.
"Daffodils," William Wordsworth. 8-25. P. 64.
"Recessional," Kipling. 7-71.

LESSON XLIV.—*Classification of Material.*

Complete chapter 11, with discussion of remaining review questions.
For memory: "To a Mountain Daisy," Burns. 8-23.
"My Heart 's in the Highlands," Burns. 7-25.
"The Star-Spangled Banner," Key. 7-32.
"Waiting," Burroughs. 7-85.
"O Captain, My Captain!" Walt Whitman. 8-80.
"Abou Ben Adhem," Leigh Hunt. P. 112.

AGRICULTURE.

One Unit.

More and more, society is coming to realize that subjects vitally related to the life of the community should be taught in the public schools of that community. The public schools, supported largely by local taxation, as they are, should work out in higher levels of community life. The progressive leaders in public education are applying the efficiency test to all the subjects in the courses of study for the public schools. The test is, (1) Is it educational? (2) Will the mastery of it result in higher health, economic, social, or moral levels of community life? The educational as well as the economic value of agriculture as a school subject is no longer questioned. Agriculture will help hitch up the work of the high school to the life of the community better than any other high-school subject.

The outline of instruction in agriculture which follows is based upon the "Elements of Agriculture," by G. F. Warren (The Macmillan Company, Chicago), for classroom instruction, and "A Unit in Agriculture," by J. D. Elliff (Row, Peterson & Co., Chicago), for laboratory work. The subject can be presented satisfactorily in three recitation periods and two laboratory periods a week. The laboratory period should be double the time of the class period and should come as the last exercise in the day. With this arrangement the class may visit neighboring farms without returning to the school after the class period is over. Under no consideration should the course be given entirely as recitation and book work.

EQUIPMENT.

For satisfactory instruction in agriculture a well-equipped laboratory is necessary. Schools with limited means, introducing agriculture, may obtain satisfactory equipment for not to exceed fifty or seventy-five dollars, if the school has a well-equipped physics laboratory. The instructor in agriculture should not be satisfied with this limited equipment; as more money is available additional equipment should be purchased. Much of the laboratory equipment must be home-made. The teacher should plan ahead to see that this equipment is ready when needed. Soil and crop specimens must be collected and prepared. This should be done by teacher and student at the beginning of the school year.

I. SOILS.

1. One bushel of clean sand.
2. One bushel silt loam or sandy loam soil.
3. One bushel clay soil.
4. One peck well-rotted leaf mold.
5. One bushel rich surface soil for growing plants.

II. PLANTS.

1. Seeds of corn, wheat, oats, rye, barley, etc.
2. Heads of wheat, oats, rye, barley, and as many sorghums as possible.
3. Specimen samples of wheat, oats, rye, barley, red clover, white clover, alsike clover, alfalfa, timothy, orchard grass, blue grass, redtop, millet, cowpeas, soy beans, etc.
4. A collection of economic seeds, obtainable free, from the United States Department of Agriculture, Seed Laboratory, Washington, D. C. Send $1.50 to pay for packing and cases.
5. Several samples of seeds of alfalfa, clover and millet, with prices, should be obtained from reliable Kansas seed houses.

The following minimum equipment should be purchased for a class of ten students, to conduct successfully the laboratory exercises in the following outline:

One pair of balances weighing to grams.
Five glass tumblers.
Five thermometers.
Five glass or tin funnels.
Five small sieves of various size meshes, for sifting soil.
Ten wide-mouth, eight-ounce bottles.
Twenty pint Mason jars.
Ten shallow pans.
Ten student lamp chimneys.
Ten heavy dinner plates for seed germination.
Ten panes of glass (8 x 10 inches).
Ten shallow wooden boxes for growing cuttings (12 x 18 x 3).
One-half pound small-sized glass tubing—one-fourth inch.
One-half pound small-sized glass rods—one-fourth inch.
Filter paper.
Litmus paper.
Several yards of heavy cotton cloth to use in seed germination.
One six-bottle Babcock hand tester and supply of glassware and acid. Cost, $10.
Sample of fertilizer to use in fertilizer test when this exercise can be conducted.
Ten grafting knives. Cost, $3.
A supply of score cards for judging corn, horses, cattle, sheep and swine.
Box of insect pins.
Ten sand crucibles.
One spade.
Fifty glass test tubes.
Box gummed labels.
Ten thistle tubes.
Grafting wax.
One pound cotton.
Two quart Mason fruit jars.
Four pounds copper sulfate, 5 cents worth of potassium ferrocyanide, small amount of lime.
Small amount of cheesecloth. One or two pounds No. 3 galvanized wire.
Ten small wide-mouth bottles.
A small amount of lumber for making insect boxes, germination boxes, propagation beds, etc.
If possible, a half acre or more of land to use for school garden and experimental field.

In addition to this equipment the following reference books should be purchased; this is a minimum list. Additional books should be purchased as money is available:

1. The Soil, by F. H. King, published by the Macmillan Company, Chicago. Price, $1.50.
2. The First Principles of Soil Fertility, by Alfred Vivian, published by the Orange Judd Company, New York City. Price, $1.
3. Cereals in America, by Thomas F. Hunt, published by the Orange Judd Company, New York City. Price, $1.75.
4. Forage and Fiber Crops in America, by Thomas F. Hunt, published by the Orange Judd Company, New York City. Price, $1.75.
5. Popular Fruit Growing, by L. B. Green, published by Webb Publishing Company, St. Paul, Minn. Price, $1.
6. Vegetable Gardening, by L. B. Green, published by Webb Publishing Company, St. Paul, Minn. Price, $1.
7. Types and Breeds of Farm Animals, by C. S. Plumb, published by Ginn & Co., New York City. Price, $2.
8. Farm Management, by F. W. Card, published by Doubleday, Page & Co., New York City. Price, $2.
9. Chapters in Elementary Agriculture, Nos. II, V and VI, Extension Department, Kansas State Agricultural College, Manhattan, Kan. Free.
10. Bulletin No. 160, Kansas State Experiment Station, Manhattan, Kan. Free.
11. Bulletin No. 203, Bureau of Plant Industry, United States Department of Agriculture. Request bulletin from Superintendent of Documents, United States Department of Agriculture, Washington, D. C. Small charge.
12. The following Farmers' Bulletins, United States Department of Agriculture: Nos. 35, 69, 101, 149, 157, 168, 244, 251, 266, 287, 339, 420, 443, and 448. These bulletins will be sent free upon request to the Secretary of Agriculture, Washington, D. C.
13. A copy for each member of the class of the following Farmers' Bulletins: Nos. 44, 123, 143, 154, 157, 187, 203, 218, 229, 255, and 260.
14. "Corn," by Bowman and Crossley, published by Waterloo Printing Company, Waterloo, Iowa. Price, $2.

SUGGESTIONS TO THE TEACHERS.

1. Have a definite plan for every lesson. Know what you are going to do and decide in advance as to the the material to be used.

2. The laboratory and field work should accompany the study of the same subject in the text.

3. The teacher must be prepared for the work in agriculture if he expects to succeed. While it is a live subject, one filled with great possibilities for arousing interest in the students, it is not a "snap" course for the teacher or for the students. The teacher should be as thoroughly prepared for the laboratory work in agriculture as he is for his laboratory work in chemistry or physics.

4. Every student should keep a notebook in which is carefully recorded the laboratory and field exercises. Insist upon accuracy, neatness and good English. The notebook should contain the date, the subject of every exercise, the material used, description of work done and illustrative drawings of equipment used, etc.

5. It will not be possible for the majority of the high schools of Kansas to have demonstration farms, but the skillful teacher will use the home farms and gardens of the students for demonstrative work. After the theoretical side has been carefully worked out in the classroom and laboratory the teacher should have every student use a plot of the home farm, garden, or vacant lot, to demonstrate some phase of the work which has been worked-out during the year. The teacher should get the coöperation of the parents in this demonstration work. Much interest will be added to the work by organizing corn clubs, stock-judging clubs, poultry clubs, etc., in connection with the high school, and then having exhibits and contests in the high-school building sometime during the fall or early winter.

6. A complete list of Farmers' Bulletins should be obtained by the teacher for the school library. These may be procured free, from the United States Department of Agriculture, Washington, D. C. In addition, all available state bulletins should be obtained from the Kansas Experiment Station, Manhattan, Kan. These publications will furnish excellent material from which to assign lists of readings.

7. The books and bulletins for reference should be taken from the library by the students only by permission from the teacher. If possible a separate case in the library should be provided for agricultural publications.

8. Subscribe for several of the best farm papers. Use these publications for assigned readings when they treat upon subjects under discussion.

9. If at any time assistance is needed write the State Agricultural College, Manhattan, Kan. All the assistance possible will be furnished.

Course of Study in Agriculture.

A.—INTRODUCTION.

I.—DEFINITION OF AGRICULTURE.

II.—DIVISIONS OF AGRICULTURE.
1. Crop growing.
2. Live stock growing.
3. Manufacture.

III.—FORCES CONTROLLING PLANT AND ANIMAL GROWTH.
1. Heredity.
2. Environment.

Literature:
1. "Elements of Agriculture", Chapter I.

B.—SOILS.

I. PLANT FOOD.
1. Elements required for plant growth.
2. Sources of plant food.
   a. Air.
   b. Water.
   c. Soil.
3. Amounts of different elements in plants.
4. Elements likely to be deficient in soils.
5. Functions of different elements.
6. How the plant gets its food.
   a. From the soil.
   b. From the air.
7. Manufacture of food material in the plant.
8. Effect of time of harvesting on composition of the plant.

Laboratory exercises:
1. Percentage of water, dry matter and ash in plants. "A Unit in Agriculture", Ex. 46, p. 46.
2. Osmosis. "A Unit in Agriculture", Ex. 21, p. 40.
3. Root hairs. "Elements of Agriculture", Ex. 26, p. 73.
4. Examination of plants for starch and protein. "Elements of Agriculture", Ex. 28, 29, p. 73.
5. Plant food. "A Unit in Agriculture", Ex. 45, p. 45.

Literature:
1. "Elements of Agriculture", ch. IV.

II.—SOIL, its physical nature.
1. Origin and formation of the soil.
2. Composition.
3. Classification of soils.
4. Soil temperature.
5. Soil water.
6. Irrigation.
7. Drainage.
8. Soil air.
9. Organic matter in the soil.
10. Life in the soil.

Laboratory exercises:
6. Study of soil. "A Unit in Agriculture", Ex. 13, 14, 15, pp. 35, 36.
7. Field lesson in soils. "A Unit in Agriculture", Ex. 16, p. 37.
8. Soil texture. "A Unit in Agriculture", Ex. 17, p. 37.
9. Temperature of soils. "A Unit in Agriculture", Ex. 18, p. 38.
10. Water capacity of soil. "A Unit in Agriculture", Ex. 19, p. 39.
11. Capillarity of soils. "A Unit in Agriculture", Ex. 20, p. 39.
12. Effects of excluding air from the soil. "A Unit in Agriculture", Ex. 25, p. 41.
13. Soil temperature. "A Unit in Agriculture", Ex. 26, p. 42.
14. Soil drainage. "A Unit in Agriculture", Ex. 27, p. 42.
15. Evaporation from the soil. "Elements of Agriculture", Ex. 42, p. 106.

Literature:
1. "Elements of Agriculture", ch. V, pp. 75-108.
2. "The Soil", by F. H. King, chs. 1, 2, 5, 6, 8.
3. Management of soils to conserve moisture. Farmers' Bulletin No. 266.

III.—SOIL FERTILITY.

1. Causes for decreased production of soils.
2. Materials used as fertilizers.
   a. Nitrogen. (Fixation of nitrogen by legumes.)
   b. Phosphorus.
   c. Potash.
   d. Lime.
   e. Complete fertilizers.
3. Barnyard manure.
   a. Value. (Factors influencing.)
   b. Amount produced by farm animals.
   c. Losses in manure.
   d. Application of manure.
4. Green manuring.

Laboratory exercises.

16. Absorption of manure by soils and losses of manure. "Elements of Agriculture", Ex. 49, 50, p. 151.
17. Fertilizer trial (where land is available). "Elements of Agriculture", Ex. 52, p. 151.

Literature:

1. "Elements of Agriculture", ch. VI, pp. 109-153.
2. "The First Principles of Soil Fertility", by Alfred Vivian.

C.—PROPAGATION OF PLANTS.

I.—PROPAGATION BY SEEDS.

1. Nature of seed.
2. Importance of vigorous germination.
   a. Condition of germination. (Vitality of seed; moisture; heat; air.)
   b. Germination affected by: (Maturity; age; kind; extremes of temperature; extremes of moisture.)
3. Seed analysis and valuation.
4. Germination tests.
5. Storage of seeds.

II.—PROPAGATION OTHER THAN BY SEEDS.

1. Spores.
2. Creeping stems and rootstalks.
3. Roots.
4. Tubers.
5. Cuttings.
6. Grafting.
7. Budding.
8. Root grafting.
9. Layering.

Laboratory exercises:

18. Absorption of water by seeds. "A Unit in Agriculture", Ex. 28, p. 43.
19. Effect of temperature upon seed germination. "A Unit of Agriculture", Ex. 29, p. 43.
20. Effect of air upon seed germination in water. "A Unit in Agriculture", Ex. 30, p. 43.
21. Effect of air upon seed germination in soil. "A Unit in Agriculture", Ex. 38, p. 45.
22. Relation of light to growth. "A Unit in Agriculture", Ex. 39, p. 45.
23. Relation of temperature to growth. "A Unit in Agriculture", Ex. 40, p. 45.
24. Purity of seeds. "A Unit in Agriculture", Ex. 31, p. 43.
25. Making a propagation bed. "A Unit in Agriculture", Ex. 32, p. 44.

II.—PROPAGATION OTHER THAN BY SEEDS—*continued.*

Laboratory exercises:

26. Cuttings. "A Unit in Agriculture", Ex. 33, p. 44.
27. Grafting. (Demonstration by teacher.) "A Unit in Agriculture", Ex. 34, p. 44.
28. Practice in grafting.
29. Budding. (Demonstration by teacher.) "A Unit in Agriculture", Ex. 35, p. 44.
30. Practice in budding.

Literature:

1. "Elements of Agriculture", ch. 3, pp. 36-59.
2. Farmers' Bulletin No. 157.

D.—FARM CROPS.

I.—CORN.

1. History and types.
2. A study of the corn plant.
3. A study of the corn kernel.
4. Selection, care and preparation of the seed.
5. Testing seed for germination.
6. Seed-bed, planting and cultivating.
7. Varieties and distribution.
   a. Boone County White.
   b. Reid's Yellow Dent.
   c. Kansas Sunflower.
   d. Hildreth.
   e. Leaming.
   f. Pride of Saline.
8. Methods of corn improvement.
   a. Ear-to-row breeding plot.
9. Uses of corn.
   a. Feed for live stock.
   b. Human food.
   c. Commercial products.

Laboratory exercises:

31. A grain of corn. "A Unit in Agriculture", Ex. 1, p. 27.
32. An ear of corn. "A Unit in Agriculture", Ex. 2, p. 27.
33. The corn plant. "A Unit in Agriculture", Ex. 3, p. 28.
34. Corn judging—single ear. "A Unit in Agriculture", Ex. 4, p. 29.
35. Corn judging—use of score card. "A Unit in Agriculture", Ex. 5, p. 30.
36. Corn judging—use of score card. "A Unit in Agriculture", Ex. 5, p. 30.
37. Testing seed corn for germination. "A Unit in Agriculture", Ex. 6, p. 33.
38. Depth to plant corn. "Elements of Agriculture", Ex. 54, p. 238.

Literature:

"Elements of Agriculture", ch. VII, pp. 154-178.
"A Corn Primer", by E. G. Schafer, Agricultural Education, vol. III, ch. V. Kansas State Agricultural College.
"Cereals in America", by T. F. Hunt.
"Corn," by Bowman and Crossley.

II.—WHEAT.

1. Origin and importance.
2. Seed-bed preparation and sowing.
3. Selection of seed.
4. Marketing.
5. Wheat products and milling.

II.—WHEAT—*continued.*

Laboratory exercises:

39. Study of a grain of wheat. "A Unit in Agriculture", Ex. 7, p. 33.
40. Study of a head of wheat. "A Unit in Agriculture", Ex. 8, p. 34.
41. The wheat plant. "A Unit of Agriculture", Ex. 9, p. 34.
42. A visit to a flour mill. "Elements of Agriculture", Ex. 55, p. 239.

Literature:

1. "Elements of Agriculture", ch. VII; pp. 178-181.
2. "A Wheat Primer", by L. A. Fitz, Agricultural Education, vol. III, ch. VI. Kansas State Agricultural College.

III. SMALL GRAIN CEREALS OTHER THAN WHEAT.

1. Oats.
2. Barley.
3. Rye.
4. Rice.

Laboratory exercises:

43. Study of a head of oats. "A Unit in Agriculture", Ex. 10, p. 34.
44. Study of a head of barley. (Follow outline for study of a head of wheat).
45. Study of a head of rye. (Follow outline for study of a head of wheat.)

Literature:

1. "Elements of Agriculture", ch. VII, pp. 181, 182.
2. Farmers' Bulletin No. 420. United States Department of Agriculture.
3. Farmers' Bulletin No. 443. United States Department of Agriculture.
4. "Cereals in America", by Thomas F. Hunt, chs. 18, 19, 20, 21, 22, 23.

IV.—SORGHUMS.

1. History and distribution.
2. Classification.
   a. Saccharine. (Amber; orange.)
   b. Non-saccharine. (1, *Durra:* Milo, Brown durra, Jerusalem corn. 2, *Kafir:* Red, White, Black-hulled White. 3, *Broom corn:* Standard, dwarf.)
3. Importance of sorghums.

Laboratory exercises:

46. A study of the sorghum head.
47. A study of the sorghum plant.

Literature:

1. Farmers' Bulletin No. 448. United States Department of Agriculture.
2. Bulletin No. 203, Bureau of Plant Industry, United States Department of Agriculture.
3. "Cereals in America", by T. F. Hunt, ch. 24.

V.—PERENNIAL GRASSES.

1. Character of perennial grasses.
2. Cultural methods.
3. Grasses for hay.
4. Grasses for pasture.

V.—PERENNIAL GRASSES—*continued.*

5. Varieties of grasses.
   a. Timothy.
   b. Redtop.
   c. Meadow foxtail.
   d. Kentucky blue grass.
   e. Orchard grass.
   f. Meadow fescue.
   g. Brome grass.
   h. Bermuda grass.

Laboratory exercises:

48. A study of grasses. (Follow outline for study of legumes.) "A Unit of Agriculture", Ex. 11, p. 34.

Literature:

1. "Elements of Agriculture", ch. VII, pp. 170-188.
2. "The Forage and Fiber Crops in America", by T. F. Hunt.

VI.—LEGUMES.

1. Clovers.
   a. Red.
   b. Alsike.
   c. Crimson.
   d. Mammoth.
   e. Sweet.
   f. White.
2. Alfalfa.
   a. Distribution.
   b. Culture and production.
3. Annual Legumes.
   a. Cowpeas.
   b. Soy beans.
   c. Field peas.

Laboratory exercises:

49. Study of Legumes. "A Unit in Agriculture", Ex. 11, p. 34.

Literature:

1. "Elements of Agriculture", ch. VII, pp. 188-198.
2. "The Forage and Fiber Crops in America", by T. F. Hunt.
3. Farmers' Bulletin No. 339, United States Department of Agriculture.
4. Bulletin No. 160, Kansas Experiment Station.

VII.—ANNUAL FORAGE CROPS.

1. Millet.
2. Cereals.
   a. Corn.
   b. Wheat.
   c. Oats, etc.

Literature:

1. Farmers' Bulletins Nos. 69, 101 and 168. United States Department of Agriculture.

VIII.—ROOTS AND TUBERS.

1. Beets.
2. Rape.
3. Potatoes.

Laboratory exercises:

50. Study of the Irish potato. "A Unit in Agriculture", Ex. 12, p. 35.

Literature:

1. "The Forage and Fiber Crops in America", by T. F. Hunt.
2. Farmers' Bulletins Nos. 25, 149, 244, 251, United States Department of Agriculture.

IX.—FIBER CROPS.
1. Cotton.
   a. Description and distribution.
   b. Types.
   c. Cultural methods.
   d. Harvesting and marketing.
   e. Manufacture and use.
2. Flax.
   a. Cultural methods and use.

Literature:
1. "Elements of Agriculture", ch. VII, pp. 198-216.
2. "The Forage and Fiber Crops of America", by T. F. Hunt, chs. 16-23.

X.—THE WOOD CROP.
1. Forests of the United States.
2. Forests and climate.
3. Conservative lumbering.
4. The farm woodlot.
5. Trees to plant.

Laboratory exercises:
51. Farm forestry. "A Unit in Agriculture", Ex. 69, p. 63.

Literature:
1. "Elements of Agriculture", ch. VII, pp. 216-227.

XI.—SYSTEMS OF CROPPING.
1. Choice of crops.
2. Crop rotation.
   a. Advantages.
   b. Profits from.
3. Crop rotation and crop failures.
4. Examples of crop rotation.

Laboratory exercises:
52. Planning a cropping system. "Elements of Agriculture", Ex. 68, p. 280.

Literature:
1. "Elements of Agriculture", ch. IX, pp. 272-280.
2. "First Principles of Soil Fertility", by Alfred Vivian, ch. X.

E.—ORCHARD AND GARDEN CROPS.

I.—ORCHARDS.
1. Locating the orchard.
2. Preparing the land.
3. Setting the trees.
4. After management.
   a. Pruning.
   b. Spraying.
   c. Frost protection.
   d. Thinning, picking, storing and marketing.
5. Varieties of fruit.
   a. Pome fruits. (Apple; pear; quince, etc.)
   b. Drupe or stone fruits. (Peach; plum—European, American, Japanese; cherry; apricot; grape.)
   c. Bush fruits. (Raspberry, blackberry, etc.)

Laboratory exercises:
53. How to plant a tree. "Elements of Agriculture", Ex. 60, p. 241.

Literature:
1. "Elements of Agriculture", ch. VII, pp. 227-234.
2. "Popular Fruit Growing", by L. B. Green.

II.—GARDENS.
1. Selection of garden spot.
2. Tillage operations.
3. Cold frames.
4. Hotbeds.
5. Vegetables to be grown.
   a. Early, hardy. (Asparagus, rhubarb, beets, cabbage, carrots, cauliflower, celery, lettuce, onions, parsnips, early peas, radishes, potatoes.)
   b. Late, tender. (Beans, corn, cucumbers, egg plant, muskmelons, peas, peppers, summer squash, tomatoes.)

Laboratory exercises:
54. The home garden. "A Unit in Agriculture", Ex. 68, p. 63.

Literature:
1. "Elements of Agriculture", ch. VII, pp. 234-237.
2. "Vegetable Gardening", by L. B. Green.

F.—ENEMIES OF PLANTS.

I.—WEEDS.
1. Control.

II.—BACTERIAL DISEASES.
1. Character.
2. Examples.
3. Treatment.

III.—FUNGOUS DISEASES.
1. Character.
2. Examples.
3. Treatment.

IV.—PARASITIC PLANTS.
1. Dodder.

V.—INSECTS.
1. Biting insects, as potato beetle.
2. Sucking insects, as chinch bugs.

VI.—SPRAYING TO CONTROL INSECTS AND DISEASES.
1. Fungicide.
2. Poisons for biting insects.
3. Contact remedies for sucking insects.

Laboratory exercises:
55. Bacteria and molds. "A Unit in Agriculture", Ex. 47, p. 46.
56. Preparation of Bordeaux mixture. "A Unit in Agriculture", Ex. 48, p. 47.
57. Making an insect net. "A Unit in Agriculture", Ex. 49, p. 48.
58. Making a killing bottle, insect box and spreading board. "A Unit in Agriculture", Ex. 50, 51, 52, pp. 48, 49.
59. Killing and mounting insects. "A Unit in Agriculture", Ex. 53, p. 49.

Literature:
1. "Elements of Agriculture", ch. VIII, pp. 244-271.

G.—ANIMAL HUSBANDRY.

I.—FEEDS.

1. Composition of feeds.
   a. Water.
   b. Ash.
   c. Protein.
   d. Fat.
   e. Crude fiber.
   f. Nitrogen-free extract.
2. Functions of the different food materials.
3. Digestibility of feeds.
4. Use of Food.
   a. Maintenance.
   b. External work.
   c. Production.
5. Comparison of concentrates and roughage.
6. Balanced rations.
7. Computing rations.
8. Condimental foods.

Laboratory exercises:

60. Computing rations. "Elements of Agriculture", Questions and Problems, pp. 288-299.

Literature:

1. "Elements of Agriculture", ch. X, pp. 281-299.
2. "Feeds and Feeding", by W. A. Henry.

II.—THE HORSE.

1. Origin and brief history.
2. Types.
   a. Speed.
   b. Draft.
3. Breeds of horses.
4. Care of horses.

Laboratory exercises:

61. Judging the draft horse by score card. "A Unit in Agriculture", Ex. 57, pp. 51, 52.
62. Judging the light horse by score card. "A Unit in Agriculture", Ex. 58, pp. 53, 59.

Literature:

1. "Elements of Agriculture", ch. XI, pp. 301-321.
2. "Types and Breeds of Farm Animals", by C. S. Plumb, pp. 1-166.

III.—CATTLE.

1. Origin and history.
2. Types.
   a. Beef.
   b. Dairy.
3. Breeds.
   a. Beef—Shorthorns, Hereford, Aberdeen Angus, etc.
   b. Dairy—Jersey, Holstein, Friesian, Ayrshire, etc.
   c. Dual purpose—Shorthorn (milking strains), Devon, Red Polled.
4. Cattle products.
   a. Milk. (Composition; commercial forms; Babcock test.)
   b. Dairy records.
5. Diseases of cattle.

III.—CATTLE—*continued.*

Laboratory exercises:

63. Study of the cuts of beef. "A Unit in Agriculture", Ex. 54, p. 49.
64. Judging of beef cattle by score card. "A Unit in Agriculture", Ex. 59, pp. 55, 56.
65. Judging of dairy cattle by score card. "A Unit in Agriculture", Ex. 60, pp. 57, 58.
66. The Babcock test for butter fat in milk. "A Unit in Agriculture", Ex. 71, pp. 63, 64. "Elements of Agriculture", Ex. 74, pp. 345-347.

Literature:

1. "Elements of Agriculture", ch. VII, pp. 325-350.
2. "Types and Breeds of Farm Animals", by C. S. Plumb, pp. 175-332.

IV.—SHEEP.

1. Types.
   a. Fine wooled—Merino, Rambouillet, Delaine, etc.
   b. Middle wooled—Southdown, Shropshire, Hampshire, etc.
   c. Long wooled—Cheviot, Cotswold, Leicester, etc.
2. Care of sheep.

Laboratory exercises:

67. Judging of sheep by score card. "A Unit in Agriculture", Ex. 61, pp. 59, 60.

Literature:

1. "Elements of Agriculture", ch. XIII, pp. 351-356.
2. "Types and Breeds of Farm Animals", by C. S. Plumb, pp. 333-454.

V.—SWINE.

1. History and distribution.
2. Breeds.
3. Care.
4. Diseases.

Laboratory exercises:

68. Judging of swine by score card. "A Unit in Agriculture", Ex. 62, p. 61.

Literature:

1. "Elements of Agriculture", ch. XIV, pp. 357-361.
2. "Types and Breeds of Farm Animals", by C. S. Plumb, pp. 467-554.

VI.—POULTRY—Chickens.

1. Types and breeds.
   a. Meat breeds—Brahma, Cochin, Langshan.
   b. General purpose breeds—Plymouth Rock, Wyandotte, Rhode Island Red.
   c. Egg breeds—Leghorn, Minorca, Black Spanish.
   d. Ornamental breeds—Polish, Game, Bantam.
2. Care of poultry.
   a. Feeding.
   b. The incubator.
   c. Poultry houses.

Laboratory exercises:

69. Study of an egg. "A Unit in Agriculture", Ex. 55, pp. 49, 50. "Elements of Agriculture", Ex. 79, pp. 368-371.
70. Poultry houses. "A Unit in Agriculture", Ex. 56, p. 50.

Literature:

1. "Elements of Agriculture", ch. XV, pp. 362-371.
2. Farmers' Bulletin No. 287, United States Department of Agriculture.

H.—FARM MANAGEMENT.

I.—THE CHOICE OF A FARM.
1. Size of farm.
2. Location.
3. Topography.
4. Soils.
5. Environment.
6. Improvements.
7. Working capital.

II.—FARM RECORDS AND ACCOUNTS.
1. Methods.

III.—THE FARM HOUSE, OR DWELLING.
1. Location.
2. Character.
3. Arrangement, etc.

IV.—OTHER FARM BUILDINGS.
1. Number.
2. Location.
3. Purpose, etc.

V.—THE FARM COMMUNITY.
1. Agricultural societies.
   a. Horticultural society.
   b. Grange.
   c. Farmers' institute.
2. The country school.
3. The country church.

Laboratory exercises:
71. Plan of farm. "A Unit in Agriculture", Ex. 63, p. 62.
72. Plan of home. "A Unit in Agriculture", Ex. 64, p. 62.
73. Plan of barn. "A Unit in Agriculture", Ex. 65, p. 62.
74. A farm problem. "Elements of Agriculture", Ex. 84, p. 387.

Literature:
1. "Elements of Agriculture", chs. XVI, XVII, XVIII, pp. 372-399.
2. "Farm Management", by F. W. Card.

AGRICULTURAL TEXT AND REFERENCE BOOKS.

LIST OF PUBLISHERS.

1. The Macmillan Company, Chicago.
2. Ginn & Company, Chicago.
3. Orange Judd Company, New York City.
4. American Book Company, Chicago.
5. University of Wisconsin, Madison, Wis.
6. Century Publishing Co., New York City.
7. Steiner Publishing Company, Toledo, Ohio.
8. D. C. Heath & Co., Chicago.
9. Webb Publishing Company, St. Paul, Minn.
10. John Wiley & Sons, New York City.
11. J. B. Lippincott Company, Philadelphia, Pa.
12. Doubleday, Page & Company, New York City.
13. Home Correspondence School, Springfield, Mass.
14. H. W. Mumford, Urbana, Ill.
15. Sanders Publishing Company, Chicago, Ill.
16. D. Appleton Company, Chicago, Ill.
17. F. H. King, University avenue, Madison, Wis.
18. Kenyon Publishing Company, Des Moines, Iowa.
19. E. P. Dutton & Co., Chicago, Ill.
20. Row Peterson & Co., 378 Wabash avenue, Chicago, Ill.
21. A. C. McClurg & Co., Chicago, Ill.
22. Charities Publication Committee, 105 East Twenty-second street, New York City.
23. Howard R. Smith, Lincoln, Neb.

SOILS AND CROPS.

Figures following the titles refer to publishers given in the list at bottom of page 124.

Author, Title, Publisher, and Price.

McDonald, "Dry Farming," 6. $1.20.
Roberts, "Fertility of the Land," 1. $1.25.
Burkett, "Soils," 3. $1.25.
Voorhees, "Fertilizers," 1. $1.25.
Hall, "The Soil," 19. $1.50.
Snyder, "Soils and Fertilizers," 1. $1.25.
King, "Irrigation and Drainage," 1. $1.50.
Lyon and Fippin, "Principles of Soil Management," 1. $1.75.
Elliott, "Practical Farm Drainage," 10. $1.50.
Widtsoe, "Dry Farming," 1. $1.50.
Fletcher, "Soils," 12. $2.00.
Hall, "Book of Rothamsted Experiments," 19. $3.50.
Hilgard, "Soils," 1. $4.00.
Stevenson and Schaub, "Soil Physics Laboratory Guide," 3. 50 cents.
McCall, "The Physical Properties of Soils," 3. 50 cents.
King, "Physics of Agriculture," 17. $1.75.
Spillman, "Farm Grasses in the United States," 3. $1.00.
Shaw, "Soiling Crops and the Silo," 3. $1.50.
Lyon and Montgomery, "Examining and Grading Grains," 2. 60 cents.
Coburn, "Alfalfa," 3. $2.00.
Wing, "Alfalfa in America," 15. $2.00.
Myrick, "Book of Corn," 3. $1.50.
Dondlinger, "Book of Wheat," 3. $2.00.
Frazer, "The Potato," 3. 75 cents.
Weed, "Farm Friends and Farm Foes," 8. 90 cents.
Shamel, "Manual of Corn Judging," 3. 50 cents.
Shoesmith, "Study of Corn," 3. 50 cents.
Shaw, "Clovers," 3. $1.00.
Shaw, "Forage Crops Other Than Grasses," 3. $1.00.
Shaw, "Grasses," 9. $1.50.
Voorhees, "Forage Crops," 1. $1.50.
Wilkinson, "Study of the Cotton Plant," 16. 35 cents.
Burkett, "Farm Crops," 3. $1.50.

ORCHARDING AND GARDENING.

Goff, "Principles of Plant Culture," 5. $1.00.
Bailey, "The Forcing Book," 1. $1.25.
Waugh, "The American Apple Orchard," 3. $1.00.
Duggar, "Fungous Diseases of Plants," 2. $2.00.
Bailey, "Nursing Book," 1. $1.50.
Bailey "Garden Making," 1. $1.00.
Bailey, "Principles of Fruit Growing," 1. $1.50.
Bailey, "Pruning Book," 1. $1.50.
Greene, "Among School Gardens," 22. $1.25.
Card, "Bush Fruits," 1. 1.50.
Rawson, "Success in Market Gardening," 12. $1.10.
Bailey, "Principles of Vegetable Gardening," 1. $1.25.
Brunett, "The Vegetable Garden," 12. $1.50.
Bailey, "Plant Breeding," 1. $1.25.
Brunett, "The Flower Garden," 12. $1.50.
Bailey, "Manual of Gardening," 1. $2.00.
Lodeman, "Spraying of Plants," 1. $1.25.
Stevens and Hall, "Diseases of Economic Plants," 1. $2.00.
Conn, "Bacteria Yeasts and Molds in the Home," 2. 60 cents.
Lipman, "Bacteria in Relation to Country Life," 1. $1.50.

ANIMAL HUSBANDRY.

Author, Title, Publisher, and Price.

Roberts, "The Horse," 1. $1.25.
Johnston, "The Horse Book," 15. $1.00.
Mumford, "Beef Production," 14. $1.50.
Shaw, "Management and Feeding of Cattle," 3. $2.00.
Coburn, "Swine in America," 3. $2.50.
Craig, "Diseases of Swine," 3. 75 cents.
Wing, "Sheep Farming in America," 15. $1.00.
Craig, "Judging Live Stock," 18. $1.50.
Wilcox, "Farm Animals," 12. $2.00.
Shaw, "Animal Breeding," 3. $1.50.
Salmon, "Diseases of Poultry," 3. 50 cents.
Robinson, "Poultry Craft," 3. $1.50.
Valentine, "How to Keep Hens for Profit," 1. $1.50.
Mayo, "Diseases of Animals," 1. $1.50.
Davenport, "Domesticated Animals and Plants," 2. $1.25.
Comstock, "How to Keep Bees," 12. $1.00.
Comstock, "Insect Life," 16. $1.50.
Smith, "Our Insect Friends and Enemies," 11. $1.50.
Jordan, "Feeding of Animals," 1. $1.50.
Shaw, "Feeding of Farm Animals," 3. $2.00.
Wing, "Milk and Its Products," 1. $1.50.
Greeley, "The Farm Dairy," 15. $1.00.
Farrington and Woll, "Testing Milk and Its Products," 1. $1.00.
Lane, "The Business of Dairying," 3. $1.25.
Smith, "Profitable Stock Feeding," 23. $1.50.

FARM MANAGEMENT.

Hunt, "How to Choose a Farm," 1. $1.75.
Roberts, "Farmers' Business Handbook," 1. $1.25.
Steiner, "How to Keep Farm Accounts," 7. $2.00.
Roberts, "The Farmstead," 1. $1.50.
King, "Ventilation," 17. 75 cents.
Davidson and Chase, "Farm Machinery and Farm Motors," 3. $2.00.
Warren and Livermore, "Laboratory Exercises in Farm Management," 1. 80 cents.

MISCELLANEOUS.

Brooks, "Agriculture," 3 volumes, 13. About $5.00.
Burkett, Stevens and Hill, "Agriculture for Beginners," 2. 75 cents.
Goodrich, "First Book of Farming," 12. $1.00.
Jackson and Dougherty, "Agriculture Through the Laboratory and School Garden," 3. $1.50.
McLeman, "Manual of Practical Farming," 1. $1.50.
Wilkinson, "Practical Agriculture," 4. $1.00.
Bailey, "Principles of Agriculture," 1. $1.25.
Davis, "Rural School Agriculture," 3. $1.00.
Duggar, "Agriculture for Southern Schools," 1. 75 cents.
Hatch and Hazelwood, "Elementary Agriculture," 20. 60 cents.
Goff and Mayne, "First Principles of Agriculture," 4. 80 cents.
Massey, "Practical Farming," 21. $1.50.
King, "The Physics of Agriculture," 17. $1.75.
Bailey, "Cyclopedia of American Agriculture," 4 volumes, 1. $20.00.
Hatch and Hazelwood, "Elementary Agriculture," 20. 50 cents.
Bricker, "The Teaching of Agriculture in High Schools," 1. $1.00.

RELIABLE DEALERS IN APPARATUS.

Chemical apparatus and glassware:

E. H. Sargent & Co., Chicago.
Eimer & Amend, New York City.
Bausch & Lomb Optical Co., Rochester, N. Y.
Woldenberg & Schaar, 378 Wabash avenue, Chicago.
Henry Heil Chemical Co., St. Louis.

General physical and agricultural supplies:

Central Scientific Co., Chicago.
E. H. Stoelting Co., Chicago.
Henry Heil Chemical Co., St. Louis.

Dairy laboratory supplies:

A. H. Barber Co., Chicago.
Creamery Coöperative Supply Co., Milwaukee, Wis.
The Creamery Package Mfg. Co., Kansas City, Mo.

DOMESTIC SCIENCE.

One Unit.

The growing realization of the importance of and the interest in the study of home economics in the state has made it necessary, in so far as is possible, to establish a standard course of study. In the absence of a satisfactory text in either domestic science or domestic art, the following syllabus, with suggestive details and bibliography, insures a similarity of subject material but does not limit the individuality of the teacher.

OBJECT OF THE COURSE.

The purpose of a course in domestic science is twofold. It has both a social and an educational aspect. From a social point of view, it dignifies manual labor, it brings the school into closer relations with the home and the community, with an uplifting influence on both, and teaches that home making is a profession requiring training just as truly as does that of the doctor or the lawyer; educationally, it correlates with all other school work to so great a degree as to furnish application for much in education that may otherwise appear formal, it trains the head to purposeful thinking, and teaches the hand to obey the thought to its own greatest efficiency. Specifically, it teaches that there is a right way of preparing food so that it may serve its purpose of nourishment economically; that there is a labor saving and a labor making way of performing the household tasks; and that work well and skillfully done is not drudgery but an interest-absorbing occupation.

TIME.

The time given to the work should be three periods per week if domestic science is to be a part of the unit credit with domestic art, or should be five periods per week if it is to constitute a unit in itself. These periods must be double periods if used for laboratory work, but should be single periods if used for lecture and recitation. For the three-fifths unit, one single period for theory and two double periods for practice is suggested, and for the five-fifths unit, two single periods for theory with three double periods for practice.

PREVIOUS TRAINING.

This course is planned for those who have had no previous school training in domestic science.

EQUIPMENT.

A. LEAST POSSIBLE FOR SATISFACTORY WORK FOR CLASS OF 12:

One gas, coal or gasoline range with oven, laboratory tables to supply each student with at least 30 inches working space and one drawer for individual equipment.
Twelve gas plates.

NOTE.—For further discussion of stoves and fuel, see suggestions at end of this list.

One supply table.
One cupboard.
One teacher's desk and chair.
Six stationary towel racks or one large clothes horse.
Twelve stools.

NOTE.—A small seat may be made to draw out from table instead of using stool. (See page 23, "Outline Lessons in Housekeeping," Office of Indian Affairs, Government Printing Office, Washington, D. C., for diagram of table to which draw seat could be added.)

One refrigerator or ice box.
Twelve standard bread tins 4½ x 4½ x 9.

NOTE.—Instead of the standard bread tins for two girls, individual bread tins 2 x 3 x 6 can be made by the local hardware store, and sold at not to exceed 10 cents each. These prove very satisfactory.

One large supply canister, size to hold 50 pounds of flour.
Two 2-quart supply canisters.
Four 1-quart supply canisters.
Ten jelly glasses with lids.
One potato ricer.
One frying basket.
One frying kettle.
Six four-hole muffin pans.
Three rolling-pins.

NOTE.—Small rolling-pins are very satisfactory. These can be made by boys in manual-training work. They are not likely to be needed before the middle of the first term, hence ample time for the boys to make them.

One toaster.
Three cake tins for loaf cake.
Three wire cake coolers.
One medium-sized meat grinder.
One 2-quart coffeepot.
One 1-quart teapot.

NOTE.—Three one-quart coffee and tea pots are really much more satisfactory, i. e., a one-quart pot of each for four girls.

One large steel skillet.
One 1-quart bean pot.
One roaster with cover.
Two teakettles.
Two chemical thermometers, one Fahrenheit and one Centigrade.
One bread knife.
One butcher knife.
One can opener.
One corkscrew.
One ice pick.
One knife sharpener.
One trussing needle.
One large milk pitcher.
One pair scissors.
One quart measure.
One dustpan.
One broom.
One stove brush.

One garbage bucket.
One clock.
Five dozen tea towels. (May be furnished by student if necessary.)
Two ½-dozen dishcloths. (May be furnished by student, if necessary.)
Twelve vegetable knives.
Twelve case knives.
Twelve forks.
Twelve tablespoons, silver or metal.
Twenty-four teaspoons, silver or metal.
Twelve crockery bowls, 1 quart.
Twelve glass measuring cups—standard, ½ pint.
Twelve desk plates.
Twelve crockery ramekins.
Twelve tin pie pans (4½ inches).
Twelve dish pans.
Twelve small sauce pans with handle.
Twelve small steel skillets, omelet pans.
Six small wire sieves.
Two glass lemon squeezers.
Six egg beaters—small size, *i. e.*, for one egg.
Six kettles.
Six double boilers or improvised double cookers, with sauce pan and kettle.
Six soap dishes.
Six scrubbing brushes.

STOVES AND FUEL.

In many towns the use of gas plates is impossible, but *some* form of individual stove *should* be supplied. There are a number of possibilities:

1. Coal-oil stoves.—Somewhat dirty, and therefore rather unsatisfactory.
2. Gasoline stoves.—Less dirty, too dangerous.
3. Electric plates.—Most ideal, very expensive.
4. Gas plates.—Furnished with gas from gasoline, retained in outside tank or cistern. Safe.
5. Alcohol stoves.—For burning denatured alcohol. (Caution should be made emphatic that under no circumstances should use of wood alcohol be permitted for burning in these stoves. Wood alcohol burns to formaldehyde and water. Formaldehyde fumes have a paralyzing effect upon muscles of eyes and throat, and wood alcohol is hence injurious to burn for light or fuel. Denatured alcohol is common ethyl or "spirit" alcohol plus a minimum quantity of poison, which renders it undrinkable. This when burned simply oxidizes to carbon dioxide and water.)

The alcohol stove seems to be most satisfactory of all. For list of varieties of these stoves address:

Orr & Lockett, hardware dealers, 71-73 Randolph St., Chicago, Ill. (Also list of domestic-science equipment and table tops.)
E. H. Sheldon & Co., 320-328 N. May St., Chicago, Ill. (Also for catalogue of tables for domestic science kitchens and varieties of table tops.)
M. & D. Range Co., 96-100 Lake St., Chicago, Ill. (Also for all hardware equipment for domestic-science departments.)
The Bangs Hardware Co., Chicago, Ill.
Specialists in alcohol stoves:
Manning Bowman Co., Meriden, Conn. (Send for booklet.) Cost, $4.50 for No. 60, a very ideal little stove; also sell one for $2.50.
The Norma alcohol stove costs $2.50. Address Walker & Co., Boston, Mass.
Lewis & Conger, New York City, sell a stove for $2.70.

The government bulletin on "Outline Lessons in Housekeeping," sent out from Office of Indian Affairs, Government Printing Office, quotes a price on individual alcohol stoves of $1.25 each. At that price the stoves ought to be within the reach of any school for individual equipment. Caution should be made, in the use of the alcohol stove with tank, that the tank be filled only to two-thirds its capacity, to allow for expansion under conditions of increased warmth.

NOTE.—The government bulletin mentioned above also gives lists of individual and general equipments for classes in domestic science. That list is a "minimum" equipment, at fairly reasonable cost, and from it several mentioned articles might be wisely eliminated. A second bulletin put out by the government from the Office of Indian Affairs, entitled, "Some Things that a Girl Should Know How to Do, and Hence Should Learn How to Do While in School," will also be found helpful in this work.

B. ADDITIONAL DESIRABLE EQUIPMENT:

One fireless cooker.
Twelve small wooden spoons.
Twelve steel spatulas (6-inch).
Twelve square cake tins (1¼ x 1¼ x 4½).
Twelve egg whisks.
Ten safety match-holders.
Six small supply canisters or jelly glasses with lids.
Six china plates, 8-inch.
Six china plates, 6-inch.
Twelve china plates, 5-inch.
Six china cups and saucers.
Six glass sherbet cups.
Six water glasses.
One glass water pitcher.
One china creamer and sugar.
One china vegetable dish.
One china platter.
One set knives and forks, silver.
One dozen teaspoons, silver.
Three tablespoons, silver.
One carving set.
One tray.
One dining-room table.
Six dining-room chairs.
One silence cloth.
Two tablecloths.
One dozen napkins.
One centerpiece.
One tray cloth.

Course of Study in Foods.

Three-fifths unit.

1. LABORATORY.—Cleanliness, order and exactness of measurement should be emphasized.
   - *a.* Study of equipment.
     1. Structure of range and principles of fire building and management.
     2. Purpose and method of using utensils.
     3. Principles of cleaning.
   - *b.* Methods of working.
     1. Use of accurate measurements.
     2. Determination of tables of measurement.

1. LABORATORY—*continued.*

c. Preparation and serving of the following foods in respect to (a) underlying principle of cookery, (b) ideal results, (c) manner and place of serving, with accompaniments:*

1. Water.
   - a. Sources of drinking supply.
   - b. Safe water, how procure or insure.
   - c. Water as a solvent.
   - d. Water as a carrier of flavors.
     1. Beverages—decoction, infusion.
     2. In fruits—fresh, replacement of in dried.
     3. In ices.
2. Fruits, fresh and dried.
3. Sugar, stages of cookery illustrated by candies.
4. Starch.
   - a. Experiments to show behavior with dry and moist heat differently applied.
   - b. Cookery in starchy vegetables and in sauces.
   - c. Combination of sauces with foods, to form variety of starchy dishes.
   - d. Principles of cookery applied to starchy deserts and beverages.
   - e. Cookery of starch in cereals as differing from freed starch.
5. Use of fats in foods.
   - a. Making of plain pastry and its use in pies.
   - b. Method of cooking in deep fat.
   - c. Method of cooking in shallow fat.
   - d. Economical use of fat, unfit for cookery, in making soap.
6. Protein.
   - a. Experiments to show behavior of protein at different temperatures, illustrated by soft- and hard-cooked eggs.
   - b. Enclosure of air in eggs by beating.
   - c. Eggs used for thickening in combinations of milk and eggs.
   - d. Combination of starchy and protein foods.
   - e. Cookery of cheese.
   - f. Structure and cuts of meat and fish as related to cookery and use as a protein food.
   - g. Cookery of vegetable protein in legumes and nuts.

c. Preparation and serving of the following foods:

7. Use of gelatine in plain jellies and sponges.
8. Study of leavening agents and flour mixtures.
   - a. Experiments to show effect of moisture and heat upon different agents.
   - b. Development of principles of use and care.
   - c. Preparation of quick breads and cakes to illustrate use of air, soda, and baking powder, and also the mixing of batters.
   - d. Making loaf of bread to illustrate leavening with yeast and the mixing of doughs.
9. Salads.

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* For a detailed outline of single lessons, see VII and VIII. Detailed outlines of all lessons for a term's work will be found in "Principles of Elementary Cookery," which may be obtained of the State Agricultural College, Manhattan, at 25 cents each, and which should be in the hands of all pupils. Teachers also should have a copy of "Syllabus of Domestic Science and Domestic Art" for 1910-'11, published by the University of Illinois, Urbana, Ill.

1. LABORATORY—*continued.*
   - *c.* Preparation and serving of the following foods:
     10. Frozen dishes.
     11. Combination of principles learned and table setting and serving in the preparation and serving a simple meal.

2. THEORY.—To be taught by lecture and reference work and recitation.
   - *a.* Development of primitive to modern apparatus for, and methods of, cookery.
   - *b.* Physics of heat production.
   - *c.* Efficiency and economy of different fuels.
   - *d.* Sanitary and economic materials for utensils.
   - *e.* Foods in general; definition, classification, use, methods by which they are made available.
   - *f.* Study of the five foodstuffs as to the principles which separate them into classes.
   - *g.* Foods representative of or related to the different classes studied as to (a) source, (b) composition, (c) production, (d) digestion, (e) economic and nutritive value, (f) purchasing, and (g) care.
     1. Water and mineral salts—ex., salt, water, tea, coffee, fruits, fresh vegetables.
     2. Carbohydrates—ex., sugar, starch, fruit, vegetables, cereals.
     3. Fats—ex., butter, cream, lard, olive oil.
     4. Protein—ex., eggs, milk, cheese, meats, fish, legumes, nuts, gelatine.
   - *h.* Acids and alkalies as related to chemical leavening agents, their manufacture and adulteration.
   - *i.* Yeasts as a plant and its relation to bread making.
   - *j.* Conditions which make for and against the ideal loaf of bread.
   - *k.* Physics of freezing.

ADDITIONAL WORK.

Two-fifths unit. Given to make Domestic Science one full unit.

1. LABORATORY—*Canning and Preserving.*—To be accompanied by lectures and recitations on preservation of food, and to occupy one-third of the additional time.
   - *a.* Principles of sterilization.
   - *b.* Cookery of fruit and vegetables in relation to preserving shape, color and flavor.
   - *c.* Canning.
   - *d.* Preserving.
   - *e.* Pickling.
   - *f.* Jelly making.

2. LABORATORY—*Invalid Cookery.*—To be accompanied by lectures and recitations on personal hygiene, and to occupy one-third of additional time.
   - *a.* Rules for administration of foods to invalids.
   - *b.* Preparation of liquid foods; drinks, broths.
   - *c.* Preparation of easily digested, nourishing solids.
   - *d.* Preparation of trays for special cases.

3. LABORATORY—*Advanced Cookery.*—To be accompanied by lectures and recitations on the home, and to occupy one-third of additional time.
   - *a.* More complex dishes representative of the different classes of foods not included in foods course but dependent upon them for foundation principles.
   - *b.* Serving of meals to give practice in marketing and serving.

4. THEORY—*Preservation of Food.*
   - *a.* Conditions favorable and unfavorable to the growth of
     1. Yeast.
     2. Mold.
     3. Bacteria.
   - *b.* Means of destroying microörganisms.
   - *c.* Relation of microörganisms to preservation of food.
   - *d.* Methods of food preservation.

5. THEORY—*Personal Hygiene.*
   - *a.* Health—definition, value of, personal responsibility for, factors in.
   - *b.* Hygiene of
     1. Bathing.
     2. Clothing.
     3. Feeding.
     4. Sleeping.
     5. Exercise.
   - *c.* Special care of
     1. Eyes.
     2. Ears.
     3. Nose.
     4. Throat.
     5. Mouth.
   - *d.* Bandaging and care of wounds.

6. THEORY—*The Home.*
   - *a.* Location of house in regard to drainage, sunlight, prevailing wind, neighborhood.
   - *b.* Considerations to be observed in planning a house.
   - *c.* Heating, lighting and ventilation, principles of each and relations to each other.
   - *d.* Convenient, abundant and pure water supply.
   - *e.* Disposal of sewage and garbage.
   - *f.* Care of the home.
   - *g.* Division and expenditure of income.

SUGGESTED DETAILED OUTLINE.

FOR LABORATORY LESSONS TO ILLUSTRATE EGGS USED FOR THICKENING IN COMBINATIONS OF MILK AND EGGS.

CUSTARDS.

- *a.* Principles.—That of the cookery of albumin. Preferred temperature 160° F. to 180° F. A custard is a mixture of egg and milk, sweetened and flavored.
- *b.* Methods of cooking.
  1. Soft custard.
  2. Steamed custard.
  3. Baked custard.
  4. Fried custard.
  5. Frozen custard.
- *c.* Utensils.
  1. For soft custard, double boiler.
  2. For baked custard, set of cups or molds in a pan of water.
  3. For steamed custard, cups or molds, covered, set in steamer.
- *d.* General rule or formula for a simple soft custard.
  1. Ingredients: 1 c. milk; 1 egg; 2 tbsp. sugar; ½ tsp. flavoring.

CUSTARDS—*continued.*

d. General rule or formula for a simple soft custard.
  2. Method of combining:
    a. Heat milk in double boiler.
    b. Beat egg slightly.
    c. Pour carefully the hot milk over the other ingredients beaten together.
  3. Precautions:
    a. If cooked too long it curdles.
    b. Stir to keep smooth and avoid lumping.
    c. Do not mix much sugar with little egg as it makes yellow threads through liquid.
    d. Do not beat the eggs too light.
    e. Pour the milk over the egg to avoid lumping and to rinse out the bowl.

e. Tests when done.
  1. For soft custard.
    a. Heaps on spoon.
    b. Foam disappears.
    c. Coats the spoon.
    d. Thickens.
  2. For baked custard.
    a. Knife blade comes out clean.
    b. Puffs on top.

f. Substitutes for eggs, or how fewer could be used.
  1. Cornstarch or flour with egg, as in puddings or sauces.
  2. Gelatine with eggs, as in creams or Bavarians.

g. Kinds.
  1. Caramel custard.
  2. Tapioca.
  3. Chocolate, cocoanut, etc., named from various flavors.

h. Serving.
  1. Soft custard.
    a. By itself.
    b. As a sauce for puddings.
    c. As a part of dishes like floating island.
    d. With meringue and jelly.
    e. Poured over fruit or cake.

i. Suggestions.
  1. If curdled, beat with egg-beater or pour back and forth, using two dishes.
  2. Remove from double boiler as soon as cooked to prevent overcooking.
  3. When cooling stir occasionally to prevent coating forming.
  4. More mellow if flavored when hot, but more flavoring required.
  5. When used as a sauce, have custard thin enough to pour.
  6. For a thicker custard, increase the number of eggs; one egg thickens as much as one tablespoon of cornstarch.
  7. Usually allow 2 tbsps. sugar to each egg.
  8. Yolks alone make a smoother custard, two yolks substituting for one egg.
  9. Two whites in place of one egg make a white custard.

SUGGESTED DETAILED OUTLINE.

FOR THEORY LESSON ON EGGS.

a. Kinds.
Hen, duck, goose, turkey, guinea hen, prairie chicken, plover, seagulls, ostrich, turtle, fish.

b. General structure.
1. Shell—porous.
2. Lining—a tough, white membrane.
3. White—a solution of proteids enclosed in thin-walled cells.
4. Yolk—an emulsion of fat in proteid solution.
5. Nucleus—a starting-point of development of young chick.
6. Cords—composed of albumen, suspending yolk in white.

c. General composition.
1. Water, 73.7 per cent.
2. Proteid, 14.8 per cent.
3. Fat, 10.5 per cent.
4. Mineral matter, 1.0 per cent.

d. Preservation.
1. Fresh egg.
   a. Rough, dull shell.
   b. Clear when held to light.
   c. Sink in water.
2. Causes of spoiling.
   a. Bacteria entering through pores of cell.
   b. Development of nucleus.
3. Methods of prevention.
   a. Exclusion of bacteria by coating shell.
   b. Providing temperature unfavorable to growth of bacteria or nucleus.

e. Cookery.
1. Requires low temperature for proper coagulation of albumen.
2. High temperature toughens albumen and makes it difficult to digest.

f. Value as food.
1. Rich in proteid and fat.
2. Very nutritious and completely absorbed.
3. Good substitute for meat.
4. Should be combined with foods rich in carbohydrates.

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EQUIPMENT DEALERS.

In many cases local dealers will be able to supply all necessary equipment, but for guidance where they are unable to do so the names of the following firms of whom materials for domestic science may be obtained are appended:

Geo. M. Clarke, Chicago. Gas fixtures. Single stoves, $4; double stoves, $10. Send for pamphlet of prices.

M. D. Range Company, 96-100 Lake St., Chicago. Gas fixtures and other types of stoves. These people furnish an ideal gas plate, nickle finish; swinging plate, which can be swung back, leaving desk clear.

Orr & Lockett, 71-73 Randolph St., Chicago. Alcohol stoves, gas fixtures and all domestic science hardware equipment. These people have been making a specialty of equipping domestic science kitchens, and have lists and prices, ready for inspection, from which choice may be made.

C. G. Everson & Co., 83 E. Lake St., Chicago. Stoves, gas fixtures, and all hardware.

The Bangs Hardware Company, Chicago. Alcohol stoves, oil and gasoline stoves, gas fixtures and hardware.

For alcohol stoves:

Manning Bowman Company, Meriden, Conn. Send for booklet. Stove No. 60 costs $4.50, and costs 0.016 per hour; another costs $2.50.

Walker & Co., Boston, Mass. The Norma Alcohol Stove. Stove costs $2.50; cost per hour, $0.011.

Lewis & Conger, New York. Alcohol stove with wick. Price, $2.70.

For all dish and enamel ware supplies, Carson Pirie, Scott & Co., Chicago, furnish beautiful varieties. Send for lists and prices.

Montgomery Ward & Co., Kansas City, Mo., furnish lists for domestic science equipment.

E. H. Sheldon & Co., 320-328 North May St., Chicago. Domestic science tables. Table for four girls, including burners for gas: Opalescent glass top, $22.50; cement fiber top, $19.50.

Morietta Glass Company, Indianapolis, Ind. Opalescent glass table tops.

Alberene Company, Chicago, New York and Boston. Patent stone or Alberene table top. (Looks like gray marble.) Cost, $18.

Imperial Floor Co., 1108 Granite building., Rochester, N. Y., Cement table top.

SUGGESTIONS.

Tables may be made by local carpenter, under the direction of the domestic science teacher, and covered in various ways:

Oilcloth.—This has many disadvantages.

Soft wood.—Very hard to keep clean; unsanitary.

Zinc.—Sanitary; apt to wrinkle; discolors with water, salt and acids.

Hard wood.—(a) oiled pine; (b) maple; (c) oak. All wood tables require much time on part of girls for scrubbing.

Glazed tile.—White. Cracks appear in cement after service.

Unglazed tile.

Opalescent glass.—Sanitary, ideal, beautiful.

Fiber cement.—Good.

Marble or Alberene.—Good.

Orr & Lockett, of Chicago, furnish a metal top which screws down on wood top; does not have the disadvantage of wrinkling found in zinc.

DOMESTIC ART.

OBJECT OF THE COURSE.

1. To arouse in the pupil a respect for work by teaching her that manual labor, if well and thoughtfully done, is as worthy and elevating as intellectual effort.
2. To bring the pupil to realize that a person is not well educated unless she can use the hand as well as the head.
3. To impress her with the idea that, to produce the best results in manual as well as intellectual work, thought is required.
4. To develop an appreciation of the important part that the production of textiles and clothing plays in the industrial, economic and social world.
5. To teach economy and suitability in the purchase and making of clothing.
6. To give the pupil an understanding of the principles of hand and machine sewing, with practice to enable her to make and keep in repair her own clothing.

TIME.

Amount necessary to make two-fifths unit credit. Minimum time per period, 40 minutes.

For the following outline it will be more satisfactory to divide the time per week thus: Laboratory work, one double period; theory, one single period.

PREVIOUS TRAINING.

The pupils have had no previous school training in domestic art.

EQUIPMENT.

1. LEAST POSSIBLE FOR A CLASS OF 20.

For the hand work alone the regular school desks could be used, but for the cutting and making of garments tables would be necessary:

Five tables, 5 or 6 ft. by 30 to 36 in., $8 to $10.
Twenty chairs, per dozen, $12 to $22.
Four sewing machines, $85.
Iron; common flat iron, electric or gas, 50 cents to $4.25.
Ironing board, $1.
Drafting paper, per roll, $4 to $5.
Twenty yardsticks.
Closet or cupboard for storing materials and implements.
Materials for models furnished by the school so as to be uniform.

The pupil should furnish a box containing pins, needles, scissors, thread, tape measure, thimble, pincushion and emery; cost, 25 cents to $1, according to what she may have at home.

Materials for articles and garments are furnished by the pupil.

2. ADDITIONAL DESIRABLE EQUIPMENT.

Locker, $40.
Ironing table, $3.50.
Exhibit case.
Squares, $11 per dozen.
Skirt marker, $15.
Mirror, $2 to $25.
Cutting table.
Tracing boards.
Demonstration frame.
Illustrative material—gradual accumulation.

Course of Study in Sewing.

1. LABORATORY WORK.
   a. *Hand sewing.*
      Stitches—basting, running, backstitching, overcasting, hemming, overhanding.
      Seams—French, felled, hemmed, overhand.
      Hems—plain, French, flannel, faced, extension.
      Repairing.
         By patching—hemmed patch, overhand patch, darned patch.
         By darning—on linen, cotton, wool; stocking darn.
      Fastenings—buttonholes, buttons, hooks and eyes, blind loops, eyelets, tape.
      Simple embroidery—chain stitch, feather stitch, catch stitch, blanket stitch, hem stitch, satin stitch, outline stitch (if time allows).
      The foregoing is to be worked out with as few models as possible, most of the sewing being done upon articles for household use and upon garments, such as a towel or pillowcase, bags of various kinds, a fancy or a cooking apron, curtains, cushion covers and Christmas gifts, or upon the corset cover.
   b. *Hand and machine sewing.*
      Corset cover.
         Use tissue pattern.
         Long seams sewed on machine.
         Finished by hand.
      Petticoat.
         Draft pattern with simple, straight rule draft.
         Machine work entirely with the exception of basting and gathering.

2. THEORY.
   Study of textiles, materials and implements used.
      Cotton, flax.
      Thread, needles, pins, thimble, emery, scissors, buttons, hooks and eyes, machines.
   Evolution of spinning and weaving.
   Discussion of underwear.
      Materials—width, price, durability, suitability.
      Methods of making.
      Estimation of cost.
      Hygiene, relating especially to underwear.
      Good taste.
   Making a book illustrating cotton materials, trimmings, and methods of making, also the division of the whole amount spent for clothing, especially the amount for underwear in relation to outer garments.

2. THEORY—*continued.*

Relative value of ready-made and home-made clothing; cost, durability, conditions under which it is made.
Laundering of cotton and linen.
Inventors of machinery used in textile industries; ex., Eli Whitney.
Visits to mills and manufactories if possible.
Color in relation to dress.

A FEW LESSONS IN DETAIL.

TO ILLUSTRATE SUBJECT MATTER AND METHOD.

1. LABORATORY WORK.

a. *In hand sewing.*

MODEL VI.—MATCHING STRIPES AND PATCHING.

Material.

Gingham, 6 inches by 7 inches.
Two patches, 2½ inches square.
Thread, No. 70.
Needle, No. 9.

I.—Matching stripes.

A bias cut is a cut through both warp and woof threads. A true bias is made by laying a warp thread on a woof thread and cutting on the fold.

Model: Measure 2 inches from one corner, fold the cloth on the true bias, and cut. Make ¼-inch turning on the bias edges and overhand them together, matching the stripes carefully. Overcast the raw edges.

II.—Patching.

A patch is a piece of cloth sewed to a garment to repair it. It may be put on in various ways, as by overhanding, hemming, and darning. A patch should be large enough to cover all worn places.

Care must be taken to have the warp and woof threads of the patch run the same way as the warp and woof threads of the garment. Stripes, checks and plaids should always match.

In patching a lined garment the patch may be overhanded to the right side.

When patching near a seam or band, it is better to rip seam or band so that the patch may be sewed in with these.

Model: In two opposite corners, measure 1½ inch, and from this point mark off a 1-inch square. Beginning at the center cut to each corner of the square and fold back on the lines marked.

1. Hemmed patch.

The hemmed patch is best for worn material. Hem the garment to the patch on the right side, and on the wrong side hem the patch to the garment, lapping ¼ inch.

1. LABORATORY WORK—*contnued.*

a. *In hand sewing.*

MODEL VI.—MATCHING STRIPES AND PATCHING.

II.—Patching.

2. Overhanded patch.

The overhanded patch does not overlap the material, and for this reason the strain comes on one thread on each side. It is, therefore, not as strong a patch as the hemmed patch.

Place the patch to the wrong side of the garment, overhand it to one end of the opening, and then overhand the sides and the second end. Overcast the raw edges.

b. *In machine sewing.*

Petticoat.

1. Materials.
2. Measures for pattern.
3. Draft pattern.
4. Making.
   - a. Placing pattern and cutting.
   - b. Basting seams.
   - c. Fitting.
   - d. Sewing seams.
     French or felled.
   - e. Placket.
     Make a model showing plackets before putting into the garment.
   - f. Placing band.
   - g. Finishing bottom.
     Mark for length.
     Dust ruffle and flounce. First make model showing dust ruffle, flounce and tucks.
   - h. Button and buttonhole.

2. RECITATION WORK.

a. Cotton.

History.
Countries producing it.
Kinds.
Structure—plant, fiber.
Properties.
By-products.
Culture.
Enemies.
Manufacture—from field to cloth.
Kinds of cloth.

b. Evolution of weaving.

Need of woven material.
Primitive looms—parts and uses.
Later looms.
Preparations for weaving.
Fibers in use.

These lessons as shown require several class periods. For example, the outline for petticoat may cover one-third of a year, while the study of cotton may occupy five or six class periods.

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"Course in Sewing," Margaret J. Blair. Webb Publishing Company, St. Paul, Minn.
"Sewing Course," Mary S. Woolman. F. A. Frenald, Buffalo, N. Y.
"Embroidery and Their Stitches." Butterick Publishing Company, New York.

2. TEXTILES.

"The Story of the Cotton Plant," Wilkinson. Appleton.
"Cotton Spinning," Marsden. Macmillan.
"Textiles," Dooley. D. C. Heath & Co., Chicago.
"Textiles and Clothing," Watson.
"Some Points in Choosing Textiles," Gibbs. University of Illinois Bulletin.
"How We are Clothed," Chamberlain. Macmillan.
"Flax for Seed and Fiber." Farmers' Bulletin No. 27.
"The Cotton Plant." U. S. Bulletin No. 33.
"Useful Fibers of the World," Dodge. U. S. Department of Agriculture.
Encyclopedia.

3. WEAVING AND SPINNING.

"Origin of Inventions," Mason. Scribner's.
"Woman's Share in Primitive Culture," Mason. Appleton.
"Colonial Days in Old New England," Earle. Macmillan.
"Textiles and Clothing," Watson.

4. HISTORY, INVENTION AND INVENTORS.

"Industrial Evolution of the United States," Wright. Scribner's.
"Origin of Inventions," Mason.
"Economic History," Bogart. Longmans, Green & Co.
"Story of the Cotton Plant," Wilkinson. Appleton.
Encyclopedia.

5. HYGIENE.

"Personal Hygiene," Le Bosquet. American School of Home Economics.

6. COLOR.

"Home and School Sewing," Patten.
"Textiles and Clothing," Watson.

7. LAUNDERING.

"Chemistry of Cooking and Cleaning," Richards. Home Science Publishing Company, Boston.
"Laboratory Manual for Laundry," Shepherd. Juanita Shepherd, St. Anthony Park, Minn.

8. IMPLEMENTS AND MATERIALS USED.

Twelfth Census Report of the United States.
"A Thread Mill." O. N. T. Thread Company, Newark, N. J.
Encyclopedia.

9. PURCHASING.

"Hints on Clothing," Woolman. Teachers' College Bulletin, Columbia University, New York.
"Some Points in Choosing Textiles," Gibbs.

10. HELPFUL MAGAZINES.

Woman's Home Companion, New York.
Journal of Home Economics, Benjamin S. Andrews, Columbia University, New York.
The House Beautiful, Chicago.
Good Housekeeping, Springfield, Mass.
Ladies' Home Journal, Philadelphia.

11. SPECIAL HELP TO THE TEACHER.

"Domestic Art in Woman's Education," Cooley. Whitcomb & Barrows, Boston, Mass.

EXHIBIT WORK.

Corticelli Silk Company, St. Louis, Mo. Silk exhibit.
Wm. Crowley & Son, 211 Jackson boulevard, Chicago. Needle manufacturing exhibit.
Chattanooga Knitting Mills, Chattanooga, Tenn., for cards illustrating cotton manufacturing processes.
Belding Sewing Book. 5 cents. Published by Belding Silk Manufacturing Company, 1121 Wabash street, St. Louis, Mo.

OBSERVATION WORK.

The observation work should begin with the first review subject and should be continued throughout the year. At least once each week, or as often as practicable, the superintendent or the teacher in charge of the normal-training class should arrange a date with the grade teacher to be visited, should furnish the class an outline of the points to be observed, and should accompany the class on the visit. The following day at least a part of the recitation period should be devoted to a discussion of the results of the visit. The teacher should in a measure direct the discussion and should make it clear to the class that there is to be no criticism, and particularly no adverse criticism, of the teacher outside the classroom. The visitation may follow the order of the grades, beginning with the primary, or it may take the order in which the subject is developed in the normal-training outline. But the visitation should give the class the benefit of observing work in every grade and on every phase of the subject under consideration.

OUTLINE.

The following is suggested as a working outline of the matters to be observed. It is not expected that all of these points will be noted at any one visit; but during the course of the visitation in any one subject they should all be given careful attention.

1. CONDITION OF ROOM.
   - a. As to neatness.
   - b. As to ventilation.
   - c. As to lighting.
   - d. As to order.
   - e. As to decorations.
   - f. Summarize physical condition of room. Discuss this fully.
   - g. Were pupils and teacher as neat as could reasonably be expected.
2. SUBJECT MATTER OF LESSON.
   - a. What was it?
   - b. Was there enough of it? Too much?
   - c. Was it adapted to pupils?
3. HOW THE LESSON WAS DEVELOPED BY THE TEACHER.
   - a. Was it by quizzing, or explanation, or both?
   - b. If there was explanation was it merely repetition of textbook statements, or was it by additional facts and comparisons?
   - c. Had teacher specially prepared lesson?
   - d. Was it handled topically, or in order of the paragraphs in textbook?
   - e. Did teacher employ skill in questioning, or were questions such as were obviously suggested by textbook?
   - f. Were questions such as suggested the answer?
   - g. Were questions addressed only to a certain few, and probably the brighter ones of the class?

3. HOW THE LESSON WAS DEVELOPED BY THE TEACHER—*continued.*
   h. Were pupils questioned in rotation?
   i. Was attitude of those not reciting one of attention or of indifference?
   j. Were pupils prompt in rising and responding to questions?
   k. Were interruptions, by holding up of hands or otherwise, permitted?
   l. How might lesson have been conducted differently with advantage?
4. THE PERSONALITY OF THE TEACHER.
   a. Was teacher well poised, or nervous and disturbed?
   b. Was teacher's voice well modulated?
   c. Was teacher animated and thoroughly interested in her work?
   d. If there was lack in any of the above respects, what, in your opinion, was the cause and how could it be remedied?
5. HOW LESSON WAS RECITED BY PUPILS.
   a. Their preparation.
   b. Their presentation.
   c. Their associations and comparisons.
   d. Their generalizations and applications.
   e. Did pupils speak in proper tones?
6. ASSIGNMENT OF NEXT DAY'S LESSON.
   a. How and when made?
   b. What was object in assignment?
7. INTEREST OF PUPILS.
   a. Was it good?
   b. If so, why?
   c. If not, why not?
8. THE PUPILS AS INDIVIDUALS.
   a. What pupils had the lesson?
   b. What pupils did not have the lesson?
   c. Was failure on account of lack of study, lack of previous knowledge, lack of interest, or physical defect?
   d. What was done to correct wrong habits?
   e. What was done to encourage good habits?

PRACTICE TEACHING.

No practice teaching is required or expected. When teachers take visiting days or are ill, however, the members of the normal-training class should be utilized as substitutes. But in all such cases the members of the class to so act should be given preliminary notice if possible, and the work they are to do should be outlined and canvassed with them by the teacher or superintendent.

EXAMINATION.

All applicants for normal-training certificates must have on file in the office of the state superintendent of public instruction a certificate signed by the principal of the high school or academy, showing that they are graduates, or will be graduates by June 1, of a full four-year course, including the required work in normal training, and that such school has been duly recognized for normal-training work by the State Board of Education. This certificate shall include a transcript of all grades made during the four years.

Only those pupils will be eligible to the examination whose pledges are on file in the office of the state superintendent of public instruction.

Applicants must be examined in the branches heretofore named, viz.: Juniors in civics, hygienic physiology, and psychology; seniors in American history, methods, management, arithmetic, geography, grammar, and reading. Seniors for 1911-'12 will also be examined in psychology.

It is expected that this examination will not go beyond the material outlined in this Manual, and will deal with methods of teaching as well as subject matter.

Renewal of Certificates.

The State Board of Education has established the following rules governing the renewal of normal-training certificates:

First. Evidence of successful experience and professional interest on the part of holders of such certificates satisfactory to the State Board of Education.

Second. Holders shall attend two county teachers' institutes; provided, that attendance at an approved summer training school for two summers shall be accepted in lieu of such institute attendance.

Third. Holders shall pursue such a course of professional reading as shall be outlined by the State Board of Education.

Fourth. Holders shall have taught one year of at least twenty weeks out of the two years; provided, that attendance at a recognized institution of higher learning for two years shall be accepted in lieu of the required teaching experience.

It is expected that holders will attend one of the two institutes required before beginning to teach.

Attendance upon institute or Summer School is here held to mean attendance upon and actual participation in the regular work of the sessions for at least ninety per cent of the time, as in the case of holders of professional certificates.

The professional reading for the present prescribed by the State Board of Education for holders of normal-training certificates is Colgrove's "The Teacher and the School," published by Charles Scribner's Sons, Chicago.

From the above requirements it will be observed that the holders of normal-training certificates are expected to be under the supervision and jurisdiction of county superintendents, the same as other teachers. And before normal-training certificates are renewed inquiry will be made of county superintendents by this department as to attendance upon institute, professional spirit, and teaching success of holders of such certificates. Evidence that the prescribed professional reading has been done will also be required.

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